

ANATOMIA BRITANNICA:
A
SYSTEM OF ANATOMY.

ILLUSTRATED BY UPWARDS OF
THREE HUNDRED COPPERPLATES,
FROM
THE MOST CELEBRATED AUTHORS
IN
EUROPE.

IN SIX PARTS.

BY ANDREW BELL, F. S. A. S.

ENGRAVER TO HIS ROYAL HIGHNESS THE PRINCE OF WALES.

THE WORK APPROVED OF BY

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DUM AUDES ARDUA VINCES.

PART III.

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P R E F A C E.

THE progress of improvement, in every Art and Science, may justly be said to have been greater, and more extensively disseminated, within the short space of time which has elapsed since the Arts of Printing and Engraving were invented, than for thousands of years previous to that period.

Not only is almost every Science now taught by learned Professors, but complete Treatises of each are published, which afford opportunities to the curious inquirer of procuring an intimate acquaintance with the objects of his favourite study.

Though the progress of improvement in Anatomy has kept pace with that of the other Sciences, yet that knowledge, which might otherwise have been acquired, has, in some degree, been retarded by the want of a complete and comprehensive System, accompanied with proper delineations of the numerous parts of which the Human Body is composed: For, without such delineations, no language is sufficient to convey just ideas of those parts, and of their mutual influence upon one another. Whether this defect has proceeded from the very great labour and expence which must necessarily attend the Publication of a series of Plates, so extensive as to exhibit all the parts employed in performing the different functions of the Body, or from other causes, it is certain, that no such System has appeared since the commencement of this century. Since that era, however, many ingenious and learned men, both in Britain and in other countries, have favoured the Public with the result of their labours in those various branches of Anatomy, which accident or inclination led them more especially to cultivate. By collecting these different Works, a Library might indeed be formed, which would contain all the Anatomical knowledge that has hitherto been acquired. But, besides the enormous expence of such a collection, some of the most valuable Works are scarce, and others are entirely out of print. Hence this interesting Science is less generally understood than its importance deserves.

To remove these inconveniences, by giving as complete a view as possible of the various parts which compose the Human Body, is the professed object of the present Work. This undertaking was in contemplation for several years before its commencement; and it is now upwards of twenty since it was seriously begun. During that period, the Plan has been considerably enlarged by the acquisition of new Publications; and it is presumed, that, when finished, it will be found the most extensive Work of the kind that was ever offered to the Public. It will consist of upwards of three hundred Plates, selected from the Works of the most eminent Anatomists, particularly those of Eustachius, Duverney, Zin, Albinus, Haller, Morgagni, Waltherus, Monro, Hunters, Hewson, the Vicq. d'Azir, &c. &c.; and from that scarce and valuable Publication of Bidloo, which appeared under the name of Cowper's Anatomy. Such a Publication, by exhibiting exact representations of the Human Body, as a whole, and of all the different parts of which it is composed, and by conjoining with these full explanations of the different parts, cannot fail greatly to facilitate the studies of those Gentlemen whose profession renders a thorough knowledge of Anatomy indispensably necessary. It will likewise afford to every man of learning and taste, who is desirous of acquiring natural knowledge, and consequently anxious to obtain an acquaintance with the structure of his own Body, an easy method of gratifying that rational curiosity.

In every Work of this kind, the Engravings constitute the principal part; the importance of Engraving, to illustrate Physical Science, cannot be more clearly pointed out than it has been by the late learned Dr Hunter, in the Preface to his GRAVID UTERUS.

"THE Art of Engraving," says he, "supplies us, upon many occasions, with what has been the great desideratum of the Lovers of Science, an universal language. Nay, it conveys clearer ideas of most natural objects than words can express; makes stronger impressions upon the mind; and, to every person conversant with the subject, gives an immediate comprehension of what it represents."

"FROM the time when this Art came more generally into use, it has been more easy both to communicate and preserve discoveries and improvements; and natural knowledge has been gradually rising, till it has at length become the distinguishing characteristic of the most enlightened age of the world."

"ANATOMY has at least kept pace in improvement with the other branches of natural knowledge. Many of the moderns, through much labour and patience, as well as ingenuity and judgement, have thrown considerable light upon the structure and operations of the Human Body; and they have, particularly by Engravings, made the study of that Art, in which humanity is so much interested, both more easy and pleasant. Most of the principal parts of Anatomy have, in this manner, been successfully illustrated."

BUT, though Engraving be of such consequence to the illustration of Anatomy, it does not follow, that every Engraver must be an Anatomist; and the Reader may be disposed to ask, What induced me to turn my attention particularly to that Science? To this question, which is natural, I give the following answer.

IN 1742, the Members of the Medical Society of Edinburgh, commenced the laudable attempt of compiling a Set of Tables for the use of the Students in the University, and the engraving of them was committed to Mr Richard Cooper, the principal Artist at that time in his line. I was then his Pupil, with my much esteemed friend, the late Sir Robert Strange, whose works will continue to be admired while a taste for the Fine Arts remains.

THOUGH the design of the Medical Society was soon frustrated, the concern which I had in the Engravings, excited my attention to the Science of Anatomy, and led me to perceive many of the advantages that would have resulted from its success: I therefore resolved, so soon as my other avocations would permit, to contribute my endeavours to supply what appeared of so much importance.

ACCORDINGLY, in 1778, I published a commodious edition of Albinus's Tables of the Bones and Muscles; and this Work meeting with the approbation of Dr Monro, and other Professors, both here and at London, I was encouraged to proceed to engrave the whole Fasciculli of Haller, which appeared to be so comprehensive, that I concluded with the addition of a few Plates selected from the most eminent Authors, it would serve as a Supplement to Albinus, and when conjoined, would form what might be termed a System of Anatomy. But, after having arranged and spread out the whole Tables before me, I discovered so many blanks and vast chasms, which it was necessary to fill up, in order to make one whole, that, despairing of ever being able to complete the Plan which I had conceived, I abandoned the undertaking.

I WAS in this state of despondency, with regard to my intended System, when fortunately I met with Cowper's Anatomy,

Anatomy, a Work which I had not seen for upwards of forty years. The Plates are in folio, delineated and engraved by some of the best Flemish masters, who flourished at the close of the last century. They are designed in a systematic arrangement, and correspond so well one with another, that they appeared to me fully to supply what was wanting to complete this undertaking; which induced me again to direct my attention to the subject.

THOUGH few authors have attempted to publish a complete System of Anatomy, deterred, perhaps, by the expence of the Plates which it would require; yet many have favoured the Public with accurate delineations of such parts as their different inclinations led them more minutely to examine.—Vesalius of Brussels, about the middle of the sixteenth century, published his Anatomy, which was of the utmost service, by the important discoveries he made; and his Figures were esteemed masterpieces of Painting.

EUSTACHIUS, at Venice, in 1563, published several of his discoveries, but the great Work which he promised was not seen till 150 years after, when the Plates were found in an old cabinet, and published in 1714, by Lancisi, the Pope's Physician, who, as the writings of Eustachius could not be found, added to them a short explanatory text; and soon after another edition was published by Albinus, with fuller explanations.

EXCEPTING Libavius's description, in 1616, of Transferring the Blood of one Animal into another, no remarkable discovery was made after Eustachius, till 1628, when the immortal Harvey discovered, and demonstrated, that important phenomenon, the Circulation of the Blood.

In the course of last century, several other useful discoveries were made, such as the Pancreatic Duct, in 1642, by Virsungus; and the Lymphatic Vessels, by Bartholini. But none attempted to publish a System which should contain the new discoveries, till Johannes Swammerdam published several Treatises; and in that on Respiration, he mentions his having Figures of all the parts of the Human Body cut on Copperplates, which he intended to publish, with a complete System of Anatomy. These Plates, however, were never made public by Swammerdam; but in 1683, Gothofridus Bidloo, Professor of Anatomy at Leyden, published a Work, entitled, *Anatomia Corporis Humani*, where all the parts are delineated almost as large as the life. Mr Cowper, an English Surgeon, bought 300 copies of these Plates, and, in 1698, published them, with large Explanations in English, after adding several important Figures of his own, and prefixed his name to the Work. This edition was afterwards revised and published by Albinus; and many believe that these are the Tables promised by Swammerdam, and which Bidloo had got from his Widow. These are the Tables mentioned above; and from them I have selected a considerable number, which are ingrossed in this Work.

SINCE the commencement of the present century, Albinus, endued with an ample fortune, and assisted by an accomplished Artist, certainly proposed to himself to complete a System; but, notwithstanding the ardour with which he persevered in his design*, he lived only to complete his excellent System of the Bones and Muscles. How much, then, is it to be regretted, that the learned Haller, Waltherus, and others, did not enter into his ideas, and publish their valuable Works in a Systematic Arrangement!

M. Vicq. D'Azir, in the year 1785, many years after this Work was begun, announced his design of publishing an Universal System of Anatomy and Physiology; but the design was too extensive to be accomplished within the period of a single life. His elegant Plates of the Brain, are all that have been published; and from them I have been enabled to enrich considerably that part of the subject.

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Now

* See his Preface to his System of the Bones and Muscles.

Now that every essential discovery has been published by the most eminent men, it is not to be expected that any set of Anatomists will combine to go over a-new, and publish, what has been so accurately performed by their predecessors; and it is evident, that they would think it beneath them to compile and become the publishers of the Works of others; which proves it in vain to expect that what is so much wanted will ever be supplied from that quarter.

This furnishes a reason for my having undertaken and persevered in so arduous a task, which, I hope, will prove beneficial to young Practitioners, and, as connected with a branch of learning worthy of the attention of the Philosopher, may excite men of curiosity to cultivate a knowledge of the structure and disposition of the parts of the Human Body, their economy and use; to observe the springs which give life and action, and the mechanism by which so many different functions are performed: A knowledge not less interesting than many of the branches of Natural Philosophy, which, to the honour of the present age, seem universally to be the prevailing objects of inquiry.

The Work is divided into Six Parts. The two First Parts comprehend the complete System of the Bones and Muscles of the Human Body, as published by Albinus. The Authors from which the subsequent Parts are compiled, are mentioned in the general contents of the Work, subjoined to the annexed Plan. To the late Dr Hunter of London, and his brother, I was much indebted for their approbation of my undertaking, and for their friendly permission to make use of any thing they had published, that could enrich this Work.

P L A N.

To give a more accurate idea of the different particulars included in this Work, it may not be improper to subjoin the principal Contents of each Part.

P A R T I.

Shews the front, back, and side views of the Human Skeleton; a front view of the first, second, third, and fourth layers or orders of muscles; the first, second, third, and fourth layers of muscles, on the back parts; and a view of the primary, or outermost order of muscles, on the left side of the Body; the muscles seated before the vertebrae of the neck, below the head, with those of the larynx and pharynx, muscles of the mouth, bottom of the feet, inside of the sternum, &c.

P A R T II.

Contains the muscles of all the particular parts separated from the Body, together with the outlines of the bones to which they are affixed, or on which they lie; and such other parts belonging to them as seemed necessary, figured twice as large as the former Tables, but in the same position, and in all other respects the same, as far as they are represented in the whole figures, excepting a few of the muscles, which required either to be drawn in a different position, or in the natural magnitude, of which the reader is informed.

P A R T

P A R T III.

Exhibits the proportions of the Human Body of both sexes in a living state; microscopic views of the texture and formation of the skin, and of the hairs, on different parts of the body; the external muscles, showing their proper situation in the fore and back views of the Body, when in action, after the skin, fat, and membranes, are removed; various positions and sections of the brain and medulla spinalis; the falx, sinuses, and a microscopic view of part of the brain, and of a nerve; the skull, shewing the passages of the blood-vessels, the egress of the medulla oblongata, and nerves issuing from the brain to the organs of the senses; upwards of fifty figures of the eye, with its different parts and appendages; near seventy figures of the ear, and of the various parts which compose that organ; the nose, mouth, and tongue, with the glands which secrete the juices, and discharge them in masticating the food; the larynx, pharynx, aspera arteria, &c.; the muscles of the head and neck, with their different uses in moving the parts. And, as there is frequent occasion to mention the bones, &c. which always serve as an index to the parts described, a familiar acquaintance with their different forms is absolutely necessary. It is therefore hoped, that it will not be thought improper to conclude this section with the different bones, cartilages, and ligaments, represented nearly as large as the life. The bones, cartilages, and ligaments, &c. of the extremities, will be given at the end of Part VI.

P A R T IV.

Exhibits the mammae of both sexes, with a microscopic view of the papillae and areolae of a woman, shewing the lactiferous tubes leading to the top of the papillae, &c.; different muscles on the superior and anterior part of the trunk of the Body; the viscera contained in the thorax and abdomen, *in situ*; the fore-part of all the viscera within the cavity of the thorax taken out together; the heart injected with wax, shewing the figure of the auricles and ventricles, with the course of the vessels; various views of the heart, shewing the contortion of its fibres, some fasciculi of its fibres; the auricles expanded, shewing the tricuspid valves; the heart opened, shewing its ventricles, &c.; the heart cut transversely; various views of the heart and lungs, exhibiting the foramen ovale, Eustachian valve, &c.; dissections of the lobes of the lungs, shewing the ramifications of the bronchia, and pulmonary arteries and veins accompanying them; the aspera arteria, together with the bronchia, or ramifications of it, freed from the lungs; parts of the lobes of the lungs, with the bronchia injected with wax, and with quick-silver, to shew the lobuli, or distinct clusters of the vesiculæ, &c.; the cavity of the thorax, after the viscera are removed; the diaphragm; the muscles of the back, shewing the direction of their fibres, with full explanations of their uses; the common integuments of the abdomen, and the external appearance of its muscles; the texture of the peritonæum examined with a microscope, &c.; the omentum; the mesentery; the stomach, with various figures of the different membranes, glands, blood-vessels, &c. which compose it; the lower part of the stomach, and a portion of the intestinum duodenum continued to it, together with the pancreas and spleen, with their ducts entering the duodenum; the convex and concave surfaces of the liver and gall-bladder, their blood-vessels injected with wax, and freed from the glandular substance; portions of the intestines, shewing their structure, coats, membranes, lacteals, blood-vessels, and valves; the receptaculum chyli filled with quick-silver, with the neighbouring lymphatic glands in their proper situation, together with the adjacent parts; the lumbal glands, with the receptaculum chyli, and part of the thoracic duct, filled with mercury, and freed from the Body; the thoracic duct at its entrance into the subclavian vein, with its branches filled with wax; a gland injected with quick-silver; the kidneys, testicles, bladder of urine, and spermatic vessels, freed from the Body, and displayed; various views of the internal parts of the kidney and ureters; the membranes of the ureter viewed with a microscope; the inferior or back part of the bladder

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P A R T V.

Shows the trunks and large ramifications of all the arteries of a child injected with wax, and displayed after dissection; the external coat of a vein viewed with a microscope, where the vasa vasorum appear; the second or middle coat; the internal coat, composed of circular fibres; the various forms of the valves; the three coats of an artery, shewing the rete of small nerves, blood-vessels, and strata of fibres; a small drop of blood inclosed in a glass tube, and viewed with a microscope; the extremities of the arteries, as they appear by a microscope, in the transparent fin of a living frog, and in the extremity of the side-fin of a small living flounder, viewed with a microscope; the origin of the excretory ducts from the extremities of the blood-vessels; the origin of the lymphatic vessels; the arteries of the whole Body; the arteries of the whole posterior parts of the Body; the veins of the whole body; the veins of the whole posterior parts of the Body; above thirty Tables of the vessels, traced to their deepest recesses in the different parts of the Body, (those of the head, neck, brain, and cranium, are represented as large as the life). The other Plates in this Part will contain a full display of the Absorbent System.

P A R T VI.

Contains a complete system of the nerves, and is concluded with more than twenty Tables of the muscles of the upper and lower extremities, delineated near as large as the life, exhibiting the direction of their fibres, and insertions of their tendons, with particular descriptions of their various uses in moving the parts; and also some geometrical figures and disposition of the tendons and fleshy fibres of various muscles; likewise many Tables of the bones, cartilages, ligaments, bursæ mucosæ, &c. of the same parts; also different views of the skeletons of fœtuses, from one to nine months after impregnation.

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INTRODUCTION.

BEFORE proceeding to the Anatomical descriptions of the parts of the Human Body, let us take a brief view of the variations in the external forms of the foetus in utero from the first appearance of the embryo, and then observe the proportions in the different stages, from infancy to a full grown state; when we shall exhibit a Table of the most beautiful proportions of a man, and of a woman, as they were fixed by the ancients, and measured by Monf. Audran, from the Apollo-Pithius in the garden of the Vatican at Rome, and the Venus-Aphroditus belonging to the family of Medicis. To these we have added the measures of the Male and Female Skeletons, which, as they nearly correspond with the former, prove Monf. Audran's measures to be correct, and likewise demonstrate the symmetry and different proportions of the sexes.

If the pre-existence of parts in embryo was allowable, that at twenty-five days after conception would incline us to think the brain and whole head had a precedency, since its magnitude, then, exceeds the whole bulk of the rest of the parts. But when the time of the birth approaches, the head of the foetus does not commonly exceed one fourth part of its whole length.

THE centre, or middle part between the two extremes of the head and feet of a new-born child, is in the navel, but that of an adult is in the os pubis; and the practice of dividing the measures of children into four, five, or six parts, whereof the head is one, is used by Painters and Sculptors.

A CHILD of two years old has about five heads in its whole length, but one of four or five years old has near six; about the fifteenth or sixteenth year, seven heads are the proportions or measure, and the centre inclines to the upper parts of the pubis. Hence it appears, that as the growth of the body advances, there is a gradual approach to the proportion of an adult, of near eight heads in the whole length, of which, as mentioned above, the head makes one.

THE measures being regulated by those of the head. The head is divided into four parts, one of which reaches from the lower part of the chin to the lower part of the nose; another from the lower to the upper part of the nose between the eye-brows; a third from between the eye-brows to the hairs upon the forehead; and a fourth from thence to the top of the head. Each part is divided into twelve minutes, and the minutes into halves, thirds, and fourths.

PROPORTIONS of a MAN and of a WOMAN,

MEASURED FROM THE ANTIQUE.



THE whole height of the APOLLO, supposing him to stand upright, and to be equally poised on both his feet, from the sole of the foot to the top of the head, measures 7 heads, 3 parts, 6 minutes.

THE whole height of the VENUS, supposing her also to stand erect, measures 7 heads 3 parts.

TABLE OF THE MEASURES.

Head and Trunk of the Body Lengths.

From the top of the head to the bottom of the chin, 4 parts, or	-	-
From the bottom of the chin, to the top of the sternum or breast-bone,	-	-
From the top to the bottom of the sternum, or pit of the stomach,	-	-
From the pit of the stomach to the navel,	-	-
From the navel to the pubis,	-	-
Length of the head and trunk of the body,	-	-

APOLLO.			VENUS.		
Heads.	Parts.	Min.	Heads.	Parts.	Min.
1			1		
	1	7		1	8
	3	10		3	6
	2	10		2	7
	3	6		3	9
3	3	9	3	3	6

Lower Extremities Lengths.

From the pubis to the small of the thigh, above the patella or knee-pan,	-	-
From the small of the thigh, to the joint or middle of the knee,	-	-
From the joint of the knee, to the small of the leg above the ankle,	-	-
From the top to the bottom of the ankle,	-	-
From the bottom of the ankle to the bottom of the heel,	-	-

Length of the lower extremities,	-	-
Length of the head and trunk,	-	-
Length of the whole figures,	-	-

1	2	6	1	2	3
	1	9		1	6
1	1	9	1	2	
	1			1	
		9			9
3	3	9	3	3	6
3	3	9	3	3	6
7	3	6	7	3	

Length of the Upper Extremities.

From the top of the shoulders to the elbow,	-	-
From the elbow to the hand,	-	-
From the joint of the hand to the root of the middle finger,	-	-
From the root to the tip of the middle finger,	-	-

Length of the fore-arm and hand,

1	2	3	1	2	3
1	1	2	1		6
	1	8		1	6
	1	10		1	7
3	2	11	3	1	10

Breadth of Different Parts.

Between the outward angles of the eyes,
Of the face at the temples,
Upper part of the neck,
At the shoulders,
Below the armpits,
Between the nipples,

N. B. From the bottom of the chin to the horizontal line of the nipples, length,

At the small of the waist,
At the loins, or os ilium,
At the haunches, or tops of the thigh-bones,
Of the thigh at top,
Of the thigh below the middle,
Of the thigh above the knee,
Of the leg below the knee,
At the calf of the leg,
Below the calf,
Above the ankle,
Ankle,
Below the ankle,
Middle of the foot,
At the roots of the toes,
Of the arm over the biceps muscle,
Above the elbow,
Below the elbow over the long spinator,
At the wrist
Over the first joint of the thumb,
Over the roots of the fingers,

APOLLO.			VENUS.		
Head.	Parts.	Min.	Head.	Parts.	Min.
	1	6		1	7
	2	2		2	2
	2			1	11
2			1	3	8
1	2	5	1	1	8
1		7		3	8
1		7		1	1
1	1			1	8
1	1	3	1	1	6
1	1	5	1	2	3
	3			3	1
	2	8½		2	7
	1	8		2	
	1	6		1	10½
	2	4		2	3
	1	7		1	11½
	1	2		1	2
	1	4		1	3
	1	1½		1	1
	1	4		1	3
	1	7		1	7
	1	8		1	9
	1	6		1	5
	1	10		1	7
	1	1		1	
	1	9		1	8
	1	7		1	6

Side-View Length.

From the top of the head to the shoulder,
From the top of the shoulder to the loins above the hip,
From the loins to the lower part of the hip,
From the hip to the hollow of the thigh,
From the hollow of the thigh to the heel,

Length of the figures,

1	1	8	1	1	6
1	3	3	1	1	7
1		2	1	2	1
1	2		1		11
2		5	2		11

Side View.

From the forehead to the back of the skull,
From the wing of the nose to the tip of the ear,
The neck,
From the breast to the back, over the nipples,
At the small of the back,
From the belly, above the navel, to the back of the loins,
From the bottom of the belly to the round of the hips,
From the fore-part of the thigh to the bottom of the hip,
At the middle of the thigh,
Above the knee,
Middle of the knee below the patella,
Below the knee,
At the calf of the leg,
Below the calf,
At the ankle,
Thickest part of the foot,
Length of the foot,

	3	6		3	4
	1	8½		1	6
	2			1	11
1		6	1		6
	3	6		3	7
	3	9	1		2
1			1		5
	3	2		3	7
	3	3		3	6½
	2	1		2	3
	2	1		2	2
	1	9		1	11
	2	1½		2	3
	1	8		1	9
	1	5½		1	4
				1	3
1		6	1		4½

Measures

*Measures of the Skeleton of a Man, from Table I. Part I. and of a Woman,
Table XLIX. Part III.*

N. B. The head of the female skeleton is turned, which apparently shortens its length, but if the scale is applied from the crown of the head to the top of the sternum, it will exactly answer the Table.

From the top of the head to the bottom of the lower jaw, - - - - -

From the lower jaw to the top of the sternum, - - - - -

Length of the sternum, - - - - -

From the sternum to the top of the os ilium, - - - - -

From the top of the os ilium to the bottom of the pelvis, - - - - -

From the pelvis to the joint of the knee, - - - - -

From the joint of the knee to the lower joint of the tibia or leg-bone, - - - - -

From the tibia to the bottom of the calcanei or heel-bone, - - - - -

Length of the skeleton, - - - - -

APOLLO.			VENUS.		
Heads.	Parts.	Min.	Heads.	Parts.	Min.
1			1		
	1	8			
	3	8½			
	2	9			
1		10½			
1	3	2			
1	3	4			
		10			
7	3	6	1		

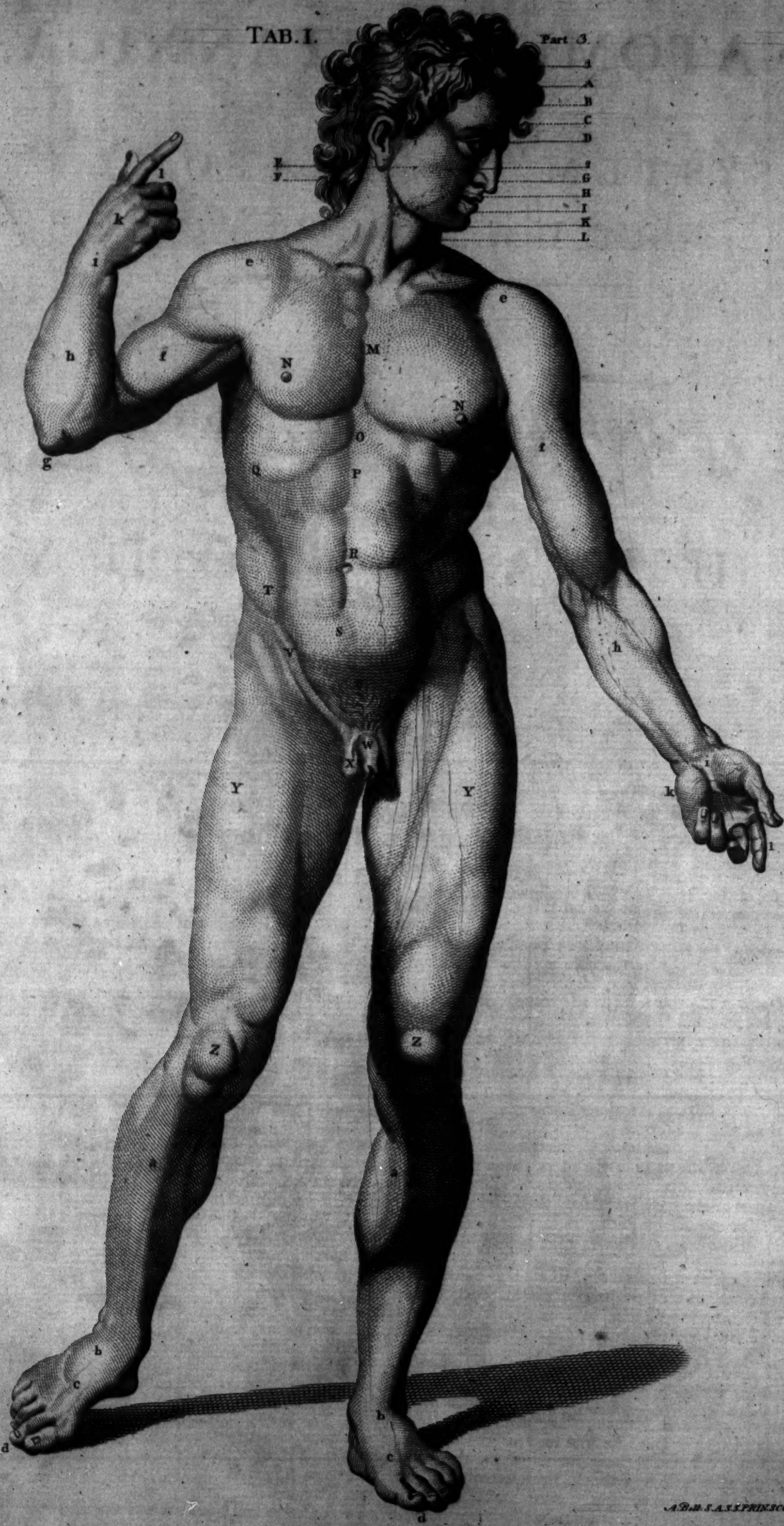
THE most remarkable differences of the symmetry or proportions of a man and of a woman to be observed from the Table are : First, the shoulders of a man are broader, measuring two heads ; and the haunches narrower, measuring one head, one part, five minutes ; whereas the shoulders of a woman measure only one head, three parts, eight minutes ; and the haunches measure one head, two parts, three minutes. The sternum or breast-bone of a man is longer, measuring three parts eight minutes ; and the sternum of the woman only three parts three minutes. On the contrary, the pelvis of a man is less, measuring from the top to the bottom only four parts ; whereas the pelvis of a woman measures from the top to the bottom, four parts three minutes.



TAB. I.

Part 3.

Pl. 42



A. B. S. A. S. P. R. I. N. S. C. O. T. & W. A. L. S. C. U. P. T. O. R. f. e. i. t.

ANATOMIA BRITANNICA,

SYSTEM OF ANATOMY.

PART III.

THE

First Anatomical Table

OF THE

HUMAN BODY

EXPLAINED.

BEFORE we enter upon the Anatomical Description of the Human Body, it may not be improper to take a view of the Proportions of the different Parts of a well-formed Man, and of the relative Proportions of the Male and Female, in the living State.

From the crown of the head *x*, which is covered with the hair, to the upper part of the forehead *A*, is the third part of a face.

The face *B*, begins at the roots of the lowest hairs, which are upon the forehead *A C*, and ends at the bottom of the chin *K*.

The face is divided into three proportionable parts; the first contains the forehead *A C*; the second, the nose *G*; and the third, the mouth and the chin *H I K*.

From the chin to the upper part of the sternum, or breast bone,—two lengths of a nose.

From the top of the sternum to the bottom of the breast, called *scrobiculus cordis*, *O*,—one face.

From the pit of the stomach to the umbilicus or navel *R*, one face;—the Apollo has half a nose more.

From the umbilicus to the pudendum *U*, one face.

From the pudendum to the small of the thigh above the patella or knee-pan *Z*,—two faces.

From the lower part of the knee to the small of the leg above the ankle *D*, two faces.

From the ankle, or malleolus internus, to the bottom of the heel,—half a face.

A man, when his arms are stretched out, is, from the extremity of the longest finger of his right-hand to the extremity of the longest of his left, as broad as he is long.

From one side of the breasts to the other below the nipples *N N*, two faces.

From the pit of the throat to the top of the shoulder, or extremity of the spine of the scapula,—one face; from thence to the bending of the cubit or elbow,—one face and a half; thence again to the wrist, one face and a nose. The hand with the fingers extended, contain one face: So that four faces, a nose, and half a face, is the distance between the pit of the throat and extremity of the middle finger; which, upon extension of the whole arm, &c. will amount to five faces, rather more than less.

The foot, a face and a nose in length.

As to the breadth of the limbs, no precise measure can be given, because the measures themselves not only vary according to the quality of the persons, but according to the motion of the muscles.

A man is two lengths or faces from the point of each shoulder; that is to say, from the upper part of the sternum between the clavicles, called the pit of the throat, to the extremity of the spine of the scapula, called the top of the shoulder, one length; and so, on the other side.

The breadth of the hips of a man is one length and a half; that is, from the great trochanter of the thigh-bone of one side to that of the other; the precise places of which bones are intersected by an horizontal line drawn from the pubes on each side.

L The pomum adami, or protuberant part of the larynx, which is much larger in men than in women.

M The sternum or breast-bone appearing under the skin, &c. between the two pectoral muscles.

O The *scrobiculus cordis*, commonly called the pit of the stomach, under the skin, &c. Precisely in this place is the cartilago ensiformis.

P The epigastrium.

Q Q The hypochondria, or spaces under the short ribs.

R The region of the umbilicus.

S The hypogastrium.

T One of the ilia.

U The pubes.

V One of the inguina, or groins.

W The penis.

X The scrotum.

Y Y The thighs.

Z Z The knees.

a a The legs.

b b The tarsus, or bending of the foot.

c c The metatarsus, or fore-foot.

d d The toes.

e e The shoulders.

f f The arms.

g g The fore and back parts of the elbows.

h h The fore-arms.

i i The carpus or wrist.

k k The metacarpus.

l l The fingers.

THE
Second Anatomical Table

OF THE

HUMAN BODY

EXPLAINED.

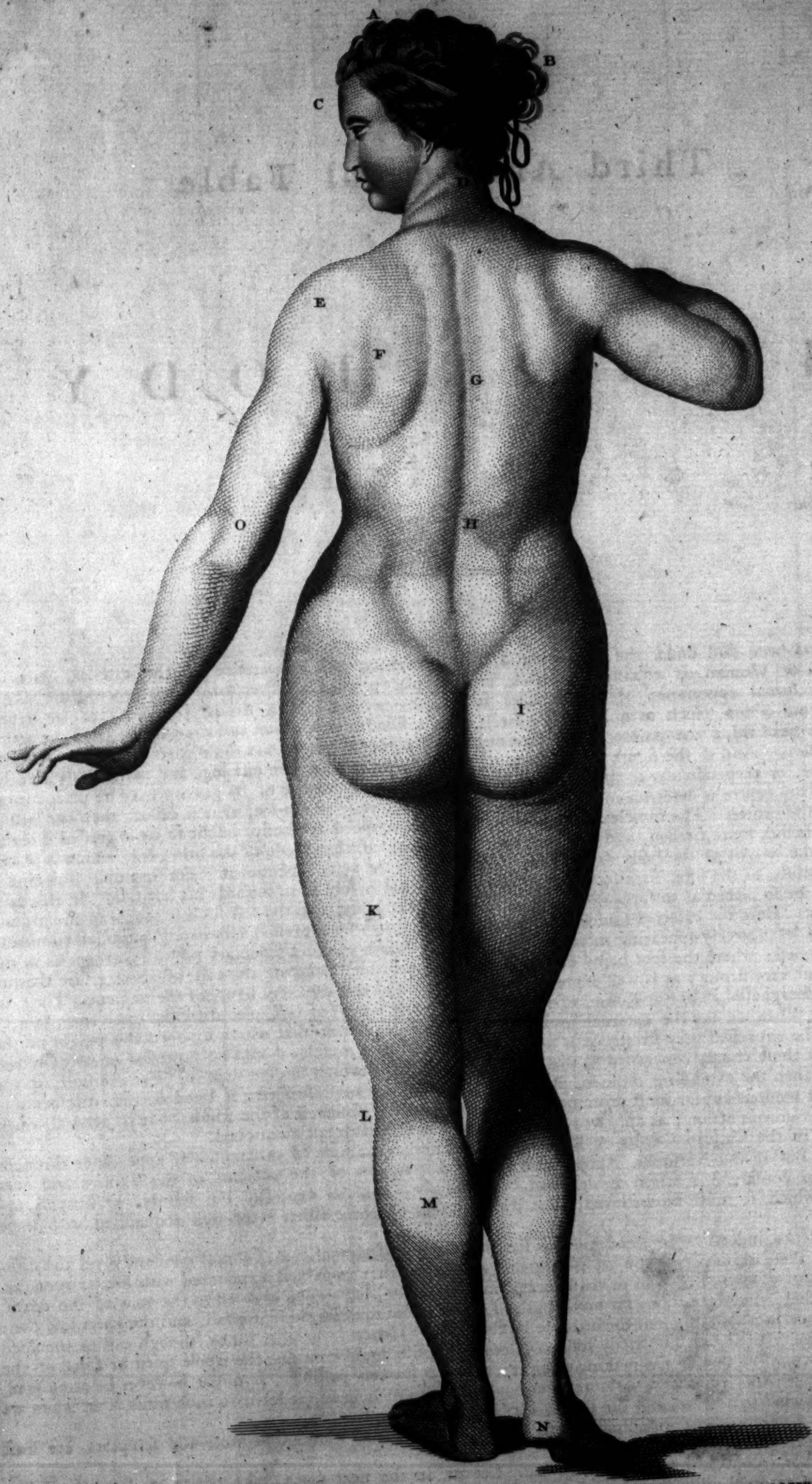
REPRESENTS the fore-part of a Woman, in whom the symmetry or proportion differs from that of a Man: First, Most remarkably in this, that the shoulders are narrower; the Man having two lengths or faces in the breadth of his shoulders, and one and a half in his hips; whereas a Woman, on the contrary, has but one face and a half in her shoulders, and two in her hips. Secondly, The clavicles, or collar-bones, and muscles in general, do not appear in Women as in Men; whence it is that the outline of the one, as painters express it, differs very much from that of the other. Nor will any action, in which a Woman uses her utmost strength, occasion such a swelling or rising of the muscles and other parts to appear, as is the case in Men; the great quantity of fat placed under the skin of Women, covering their muscles, &c. so as to prevent any such appearance.

A A The mammæ:

B The pudendum.

THE





T H E

Third Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

WHAT has been said under the preceding Table, concerning the appearance of the external parts of a Man or Woman, is equally applicable in this place; we shall therefore next proceed to take a view of the external appearance of the muscles in various actions. If a strong person is to be represented in vigorous action, (such as a Hercules, &c.), after a suitable proportion to such a figure, and the action is designed, the next thing the painter or sculptor ought to consider is, which are those parts or members chiefly employed in action. And if the figure is in a standing attitude, let him be sure one leg, and particularly its foot, be in a right line, or perpendicular to the trunk of the body, where the centre of its gravity may be placed in an equilibrium. This centre is determined by the heel; or if the figure is on tip-toe, as it is called, then the ball of the great toe is the centre. The muscles of this leg, which thus supports the body, ought to be expressed more in action, or their bellies more swelled, and their tendons more extended, than those of the other leg, which is placed only to receive the weight of the body towards that way to which the action inclines it. For example, imagine a Hercules with a club, or the like, striking at something which stood before him, towards his left-side. In this case, let his right-leg be so placed as to support the whole weight of his body, and the left slightly touching the ground only with its toes. Here the external muscles of the right-leg ought to be expressed very strong, or much tumified; but those of the left scarcely appearing more than if the whole figure was in a sedentary posture; except as in the case now mentioned; where the foot being extended, the muscles which compose the calf of the leg, are then in action, and appear very strong; as is well expressed in the right-leg of that excellent figure of the ancients, 'The Gladiator in Prince Borghese's Palace at Rome, of which we have only a copy or cast, placed by the canal in St James's Park, London. When we say the external muscles of the right-leg, or of that which supports the weight of the body, ought to be expressed very strong, it is not meant that all these muscles should be expressed equally swelled, or in action; but those chiefly concerned in that action or posture, in which the leg then is. For example, if the leg is extended, then the extending muscles, placed on the thigh, are most swelled; if bended, then the bending muscles and their tendons appear most prominent. The same may be observed of the whole body in general, when engaged in some vigorous action; as appears in the figure of the Gladiator last mentioned.

The Lascoon, in the Vatican Garden at Rome, also furnishes an example of this muscular appearance throughout the whole. But in the Antinous, Apollo, and some other figures of the ancients in the Vatican and elsewhere, where no considerable action is designed, we find their muscles expressed but faintly, or scarcely appearing; from which it must be believed, that the sculptors of these times were well acquainted with these observations.

The ancient Greeks, indeed, were accustomed to see Nudities very frequently, and almost constantly, yet the difficulty of copying these things from the life is so great, that unless they were well acquainted with similar remarks, they would fall short of nature in such performances, since even life itself, when exposed to the view of the Artist, cannot continue these vigorous actions for any length of time: The muscles therefore fall, and the parts lose their necessary appearance in action, though the attitude be the same. Hence it is, that limbs, though cast or moulded from the life itself, are not to be strictly followed, unless the life could continue the whole spirit or force of the action during the time the mould was making from it; which is scarcely possible. It might however be attempted, at least in some particular parts. Wherefore a rational theory must help us, at least, to such hints, that when we see, we may know what to observe, and the reason why it appears so in the life.

This is indeed a very entertaining study, with which many of our modern painters and sculptors, are least acquainted.

Thus far in general concerning the muscles, &c. Let us, in the next place, take notice of some particular appearances of the external muscles and other parts.—First, of the musculi sterno-mastoidei, (vid. Tab. V. 14. 14.) If either of these act, the head is turned to the contrary side, and the muscle, which performs the action, appears very plain under the skin, and is often well expressed both by painters and sculptors; as is represented in the neck of the figure of the first Table.

If the arms are lifted up, the swelling of the muscles placed on the shoulders, which perform that action, called *Deltoides*, (Tab. V. 20.), make the extremities of the spines of the shoulder-blades, (Tab. VI. i i), called the tops of the shoulders, appear hollow, or indented.

The shoulder-blades follow the elevation of the arms, their bases (Tab. VI. l l) incline at that time obliquely downwards.

If the arms are drawn down, put forwards, or pulled backwards, the shoulder-blades necessarily vary their positions accordingly; all which is to be learned by consulting the life only, when, being well acquainted with what then appears in the very action, the Artist will be able to comprehend an idea how to express it. Hence it is, we seldom find the back so well expressed as the fore parts; the latter not being subject to such a variety of alterations, as the motions of the shoulder-blades cause in the former.

When the cubit or arm is bended, the biceps muscle (Tab. V. 22.) has its belly very much raised; as appears in the right-arm of the Figure of the first Table. The like may be observed of the triceps, &c.

The right-muscle of the abdomen (Tab. V. 41. 41.) appears very strong in rising from a decumbent posture.

Those parts of the *ferratus anticus major* (ib.) which are received in the teeth, or origins of the obliquus descendens muscle, (ib. 38. 38.), are very much swelled, when the arm on the same side is thrust forward; that *ferratus* muscle being then in action in drawing the scapula also forwards.

The long extending muscles of the trunk, placed on each side of the back-bone, (Tab. VI. * *), act alternately in walking, after this manner;—if the right-leg bear the weight of the body, and the left be in translation as on tip-toe, the last-mentioned muscles of the back, on the left-side, may be observed to swell about the region of the loins; and so, on the other side.

The trochanters, or outward and uppermost heads of the thigh-bones, (ib. r. r.), vary in their positions in such a manner as no precise observations can explain their several appearances, but the study of life will soon inform the diligent observing Artist.

If the thigh is extended, as when the whole weight of the body rests on that side, the *glutæus* muscle (ib. 32. 32.) makes a different appearance from what offers at another time; but, if the thigh is drawn backwards, that muscle appears still more and more tumified.

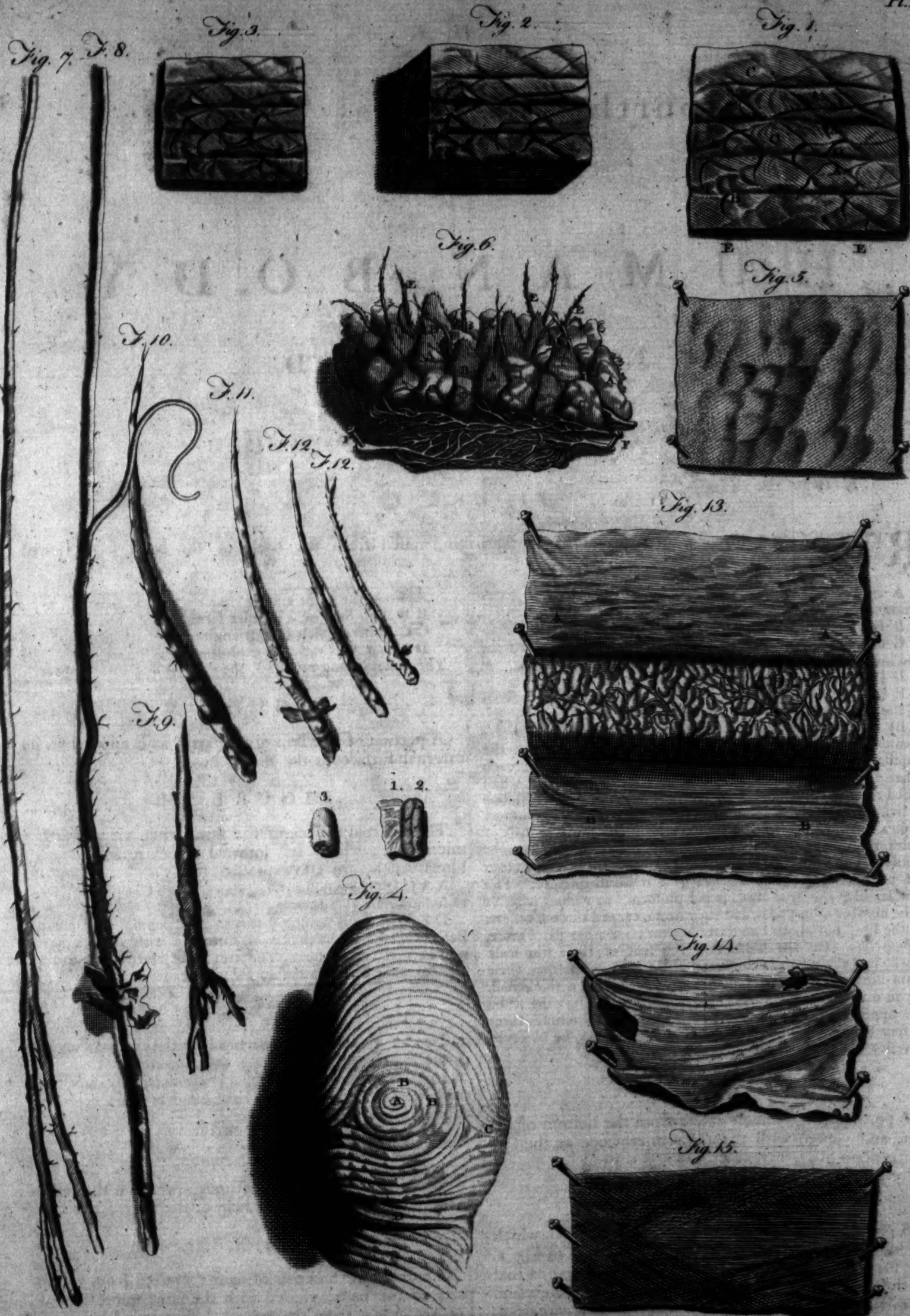
When the whole leg is drawn upwards, forwards, and the foot is at the same time inclined inwards, the upper part of the *sartorius* muscle (Tab. V. 44.) appears rising very strong. In other positions of the thigh, that muscle makes a furrowing appearance in its whole progress, as is expressed in the Figure of the first Table.

If a man is on tip-toe, the extending muscles of the leg, placed on the fore-part of the thigh, (Tab. V. 46. 47. 48.), and those of the foot, which compose the calf of the leg, (Tab. VI. 43. 44.), appear very strong, and the *musculus peronæus longus* (Tab. V. 55.) makes a considerable indentation or furrowing at that time, in its progress on the outside of the leg.

Besides these remarks, many more might be mentioned, which will soon occur to the observing Artist, who diligently consults the life; to which he ought assiduously to apply himself, after he has acquired a sufficient knowledge of the Anatomy of the external parts.

A The vertex or summit of the head.
B The hind head, the hair tied up over it.
C The fore-head.
D The neck.
E The shoulder.
F The shoulder-blade.
G The back.

H The loins.
I The buttocks.
K The thigh.
L The ham.
M The calf of the leg.
N The heel.
O The elbow.



T H E

Fourth Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

FIGURE I.

REPRESENTS a portion of the cuticle or scarf-skin, raised from the back of the hand, and viewed through a microscope.

A A The perforations or pores by which the sweat is discharged.

B B The indentures or furrows.

C C The bladder-like protuberances; both these arise from the inequality of the papillary surface of the skin itself.

D D The hairs which penetrate the cuticle.

E E The asperities or filaments by which the cuticle is fixed to the true skin.

By the assistance of the microscope, the cuticle appears composed of various strata or beds of scales, adhering to the papillary surface of the skin, and are so interwoven with each other, that they appear a continued membrane or pellicle, when raised from the true skin, whether by the application of blisters in living people, or scalding water, hot irons, or the like, in dead bodies. According to the number of these strata or beds of scales, the skin appears more or less fair, and the person is commonly said to have a thicker or thinner skin; though very often the jaundice and other diseases give it an ill tincture. The cuticle, like the true skin, is not uniform; in various parts of it the number of its scales, and their strata, exceed those of others; on the lips, not above two strata appear; on other parts more, seldom less. On the bottom of the feet of those who walk much, and the palms of the hands of laborious mechanics, these strata are not only very numerous, but each scale is thickened. If you macerate the cuticle in water, after some days the scales will appear, and you may divide it into two, sometimes three or four pellicles. The like division of it may also be observed in vesicatories, or blisters, raised on living persons.

FIGURE II.

A portion of the cuticle raised from the bottom of the foot, and viewed with the same microscope as the former; where its remarkable thickness appears.

FIGURE III.

A portion of the cuticle raised from the back, in which the indentures, furrows, &c. agree with those in Fig. 1. the surface of the true skin being exactly similar to that of the other; but at the extremities of the fingers and thumbs, the cuticle is variously wreathed and contorted, conformable to the subjacent papillary protuberances of the true skin, as appears from the following Figure.

FIGURE IV.

The upper and inner side of the thumb, likewise drawn by the assistance of the microscope.

PART. III.

A From the point arise

B B Two lines of a circular form.

C C Others which form triangles.

D Other lines variously contorted.

The cuticle being removed, the cutis or skin itself appears.

FIGURE V.

A portion of the skin of the arm, as it appears on its external surface to the naked eye.

FIGURE VI.

The external surface of the skin, when viewed with a microscope; where its internal structure, or rete of blood-vessels, are also expressed.

A A C D The papillæ pyramidales, which Cowper considered as sudoriferous glands.

E E The hairs arising between the papillæ pyramidales. Besides these parts, the skin is furnished with arteries, veins, nerves, and lymphatics: The trunks of the two former are well expressed in this Figure F F.

FIGURE VII. VIII.

Two of the hairs of the head, as they appear viewed through a microscope. Here we observe,

A villous appearance, a division at the extremity, and, near the bottom of Fig. 8. a portion of the cuticle which commonly adheres to the hair when extracted.

FIGURE IX.

The branches which sometimes appear on the top of the hair, as observed by the help of the microscope.

FIGURE X. XI. XII.

The different thickness of hairs extracted from various parts of the body, viewed with the same microscope.—Fig. 10. A hair from the groin.—Fig. 11. A hair from the nostril.—Fig. 12. Hairs from the eye-lids.

FIGURE XIII.

A portion of the fat of the abdomen.

A A Its external membrane.

B B Its internal membrane.

B

CC

C C The globules of the fat, with their blood-vessels passing to them, whence their only contents are derived.

1. The integument or covering of the globules of fat raised.

2. The globules of fat themselves.

3. Some of the globules separated from the rest, in which the breakings off of their membranes and blood-vessels are expressed. Hence it appears, that the fat is a congeries of membranous cells, which, by the microscope, appear distended with oil.

FIGURE XIV.

The external surface of the last common integument of the whole body, called the common membrane of

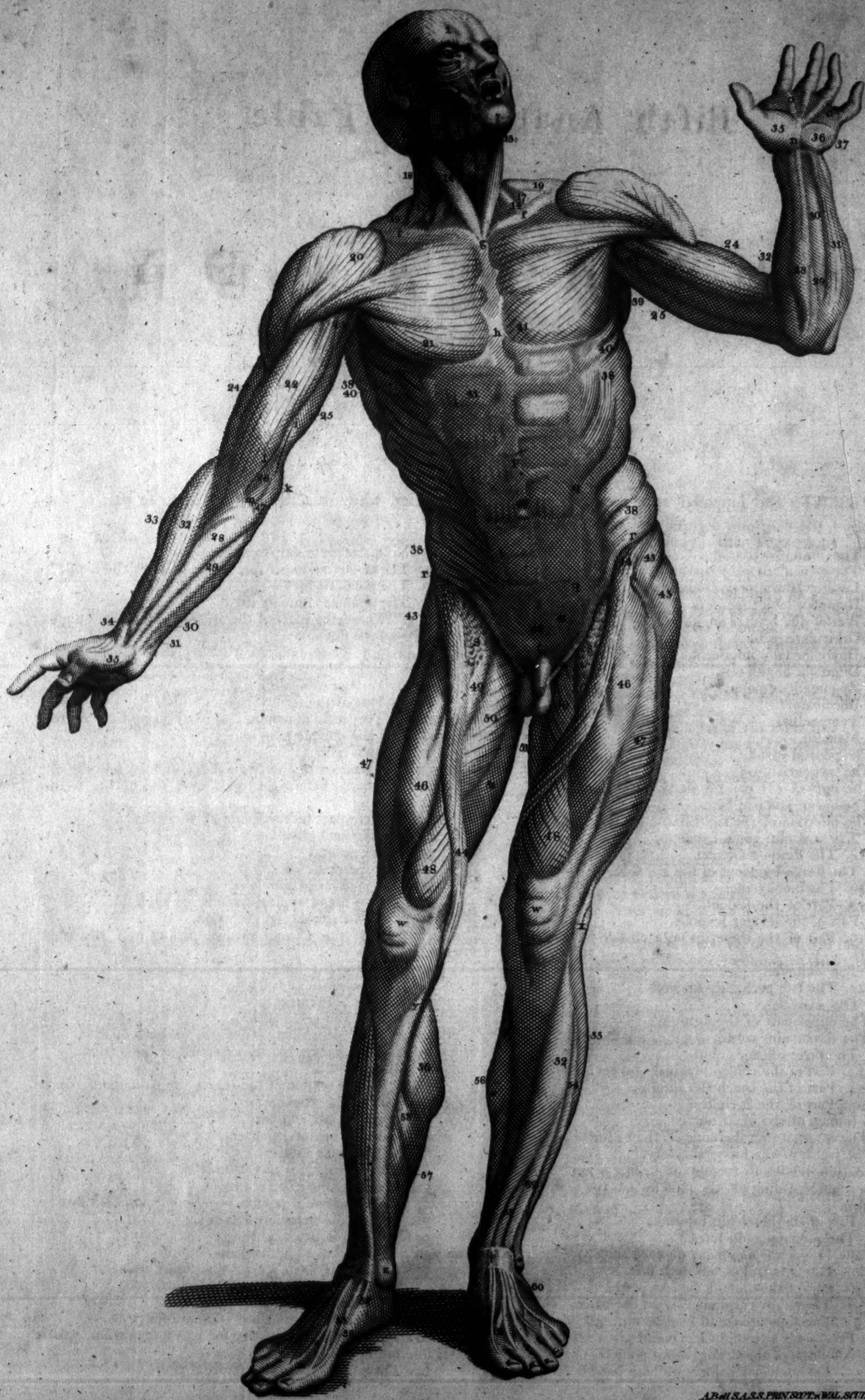
the muscles. This is divided by some into two membranes, which they distinguish by the names of *carnosa*, and *communis musculorum*.

FIGURE XV.

The internal surface of the last-mentioned membrane. The origin of this membrane is commonly said to be from the spines of the vertebrae of the back, because, as is supposed by our Author, that is the most stable part to which it is connected. It is co-extended with the skin itself, as appears in most parts, and has its corresponding foramina for the eyes, nostrils, ears, mouth, anus, and pudendum.

The whole Figures of this Table are copied from Cowper; but neither the Figures, nor the descriptions of them, are to be much attended to, both being deficient in accuracy. As they are the only delineations, however, of these parts, of which we could avail ourselves, we have thought proper to insert them; correcting, at the same time, the opinions and observations of the Author, as far as circumstances would admit.

THE



T H E

Fifth Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

REPRESENTS the supposed appearance of the external muscles, while in action, on the anterior part of the body; the common teguments being removed.

1. The musculus frontalis.
2. The orbicularis palpebrarum.
3. Levator labii superioris alæque nasi.
4. Depressor labii superioris.
5. Part of the levator anguli oris.
6. Orbicularis oris.
7. Depressor labii inferioris.
8. Depressor anguli oris.
9. Zygomaticus major.
10. Buccinator.
11. Temporalis.
12. Masseter.
- a The parotid gland.
- b The zygoma.
- c The duct of the parotid gland.
- d The lower jaw laid bare.
- e The insertion of the right sterno-mastoid muscle.
13. The musculus genio-hyoideus.
- 14 14. The sterno-mastoidei.
15. The sterno-hyoideus of the left-side.
- 16 16. The omohyoidei.
- 17 17. Part of the scaleni.
18. Part of the levator scapulae.
- 19 19. Part of the trapezius on each side inserted to the clavicle.
20. The deltoidei.
- 21 21. The two pectorales majores.
- f f The clavicles.
- g The upper part of the sternum.
- h The scrobiculus cordis, or pit of the stomach.
22. The biceps flexor cubiti.
- 23 23. Part of the coraco brachialis on each side.
- 24 24. Part of the brachiales interni.
- 25 25. Part of the tricipites.
- i A branch of the ulnar nerve.
- k The internal protuberance of the os humeri.
- l The trunk of the humeral artery.
- m A thin tendinous membrane arising from the biceps muscle, and covering all the muscles on the inside of the fore-arm.
26. Part of the brachialis internus.
27. The pronator radii teres.
- 28 28. Flexor carpi radialis, on each side.
- 29 29. Palmaris longus, on each side.
- 30 30. Part of the muscoli flexores perforati of the fingers.
- 31 31. The flexor carpi ulnaris, on each side.
- 32 32. The supinator radii longus, on each side.
33. Part of the extensor carpi radialis.
34. A tendon of the flexor longus pollicis.
- 35 35. The abductor pollicis, on both hands.
- n The ligamentum carpi annulare.
- o o The tendinous expansion of the palm of the hand.
36. The palmaris brevis.
37. The abductor minime digiti.
- 38 38. The fleshy parts of the obliquus descendens abdominis, on both sides.
- 41 42. p q Their tendons running over the recti abdominis, to the linea alba.
- 39 39. Parts of the latissimi dorsi.
- 40 40. Part of the serrati majores antici.
- 41 41. The recti abdominis, as they appear under the tendons of the oblique muscles.
- p The linea alba.
- q q The tendons of the two oblique muscles forming the linea simularis, before they pass over the rectus to the linea alba.
- r r The fore-part of the spines of the ossa ilia.
- s s The inguinal glands.
- t The ossa pubis.
- u u The spermatic cord.
42. The muscoli pyramidales.
- 43 43. The tensor vaginae femoris, on each side.
- 44 44. The sartorius, on each side.
45. Part of the gluteus medius passing over the great trochanter.
- 46 46. The rectus femoris, on both thighs.
- 47 47. The vasti externi.
- 48 48. The vasti interni.
49. Part of the pectinalis.
- 50 50. The triceps longus femoris, on both sides.
- 51 51. The gracilis, partly expressed on both sides.
- w w The patellae.
- x Part of the tendon of the tensor vaginae femoris, fixed to the head of the fibula.
- y The right tibia laid bare.
- z The malleolus internus.
- * The malleolus externus.
- † † The ligamentum tarsi annulare.
52. The musculus tibialis anticus.
- 53 53. The extensor pollicis pedis longus, on each side.
54. Part of the peroneus brevis.
55. Part of the peroneus longus.
- 56 56. Part of the gastrocnemii externi.
57. Part of the flexor longus digitorum pedis.
58. Part of the gastrocnemius internus.
59. Abductor pollicis.
60. Part of the extensor brevis digitorum pedis.
61. The tendon of the extensor brevis digitorum, which is inserted into the great toe.
62. The extensor longus digitorum pedis.

T H E

T H E

Sixth Anatomical Table

O F T H E

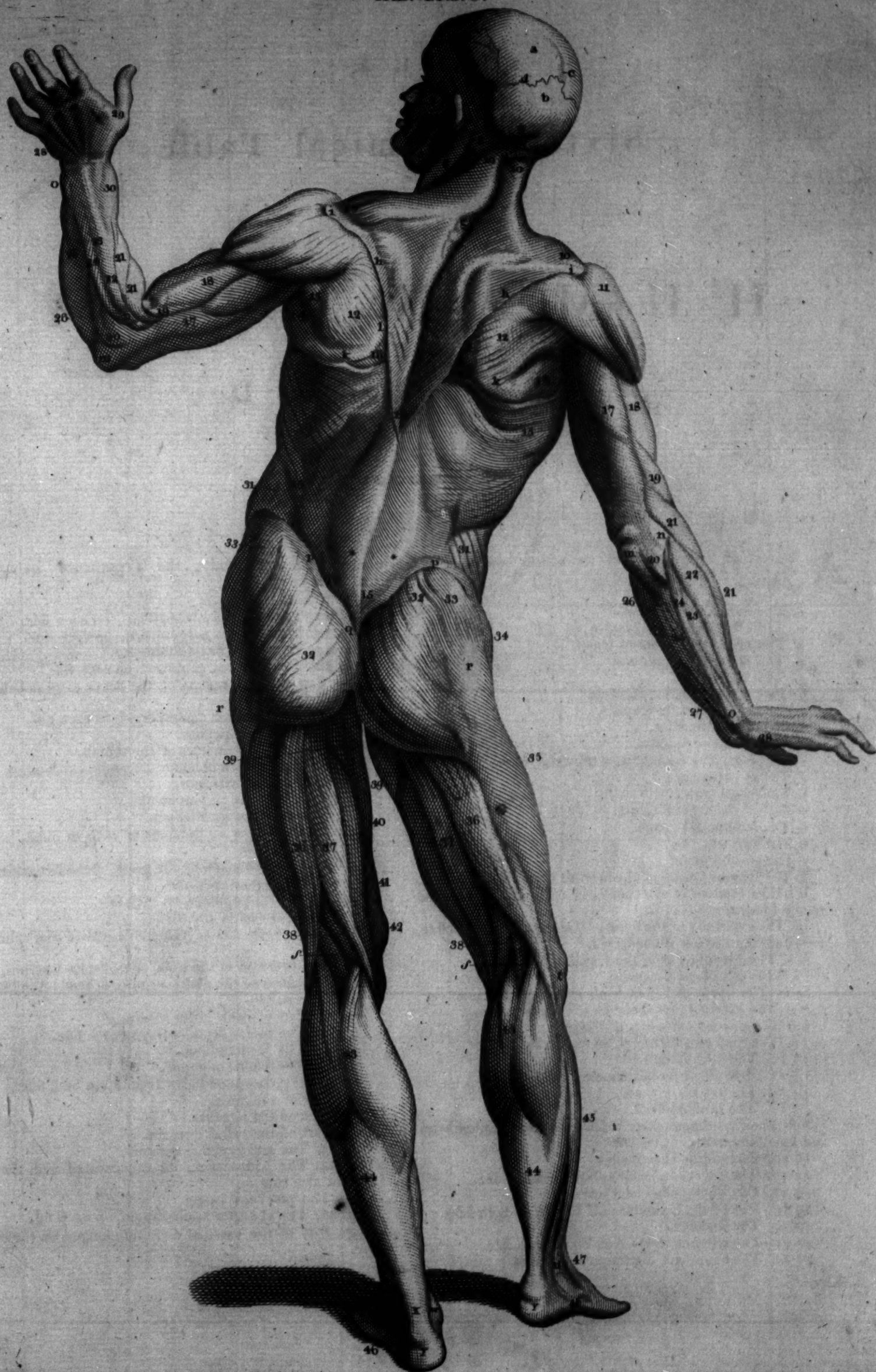
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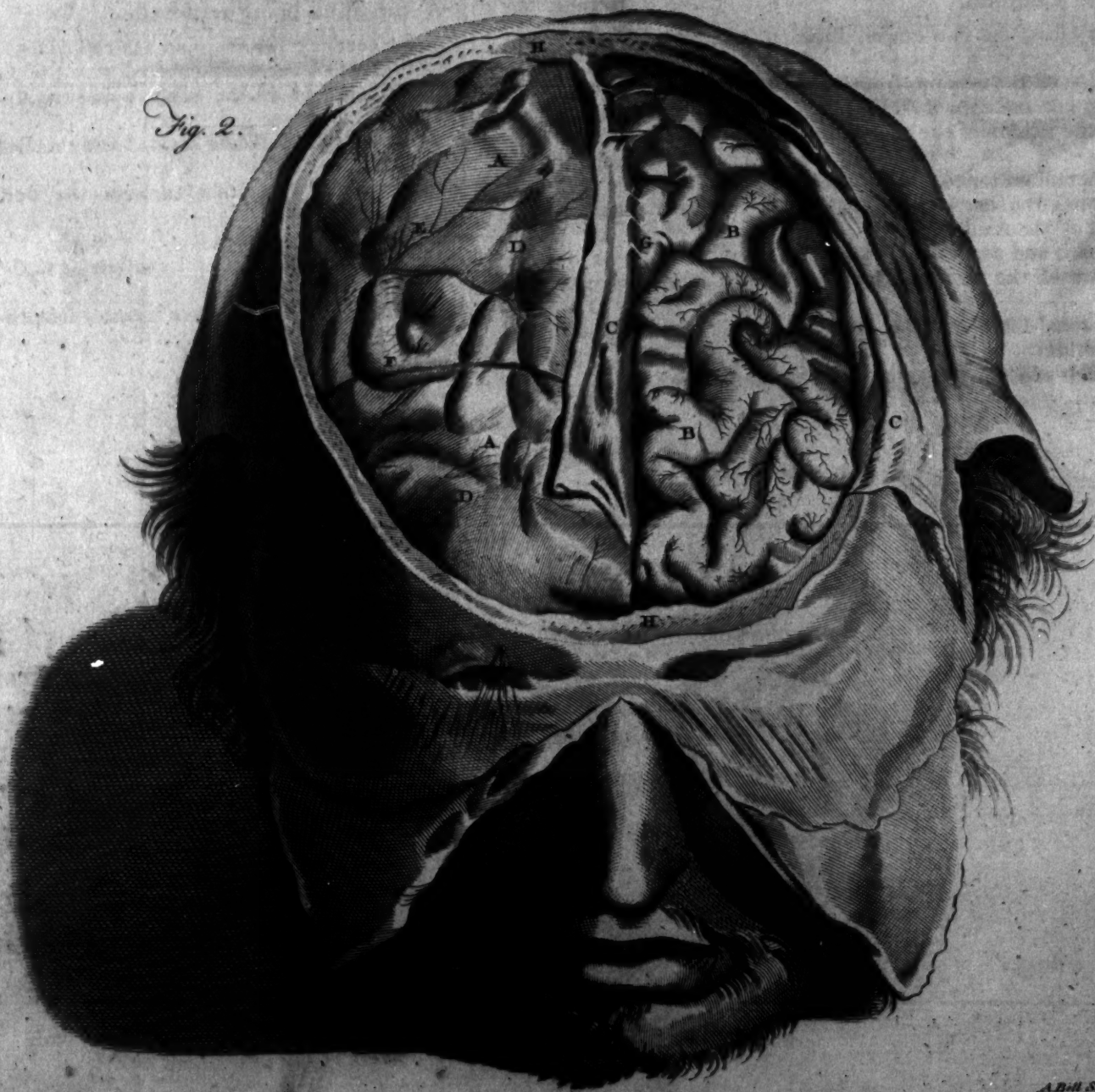
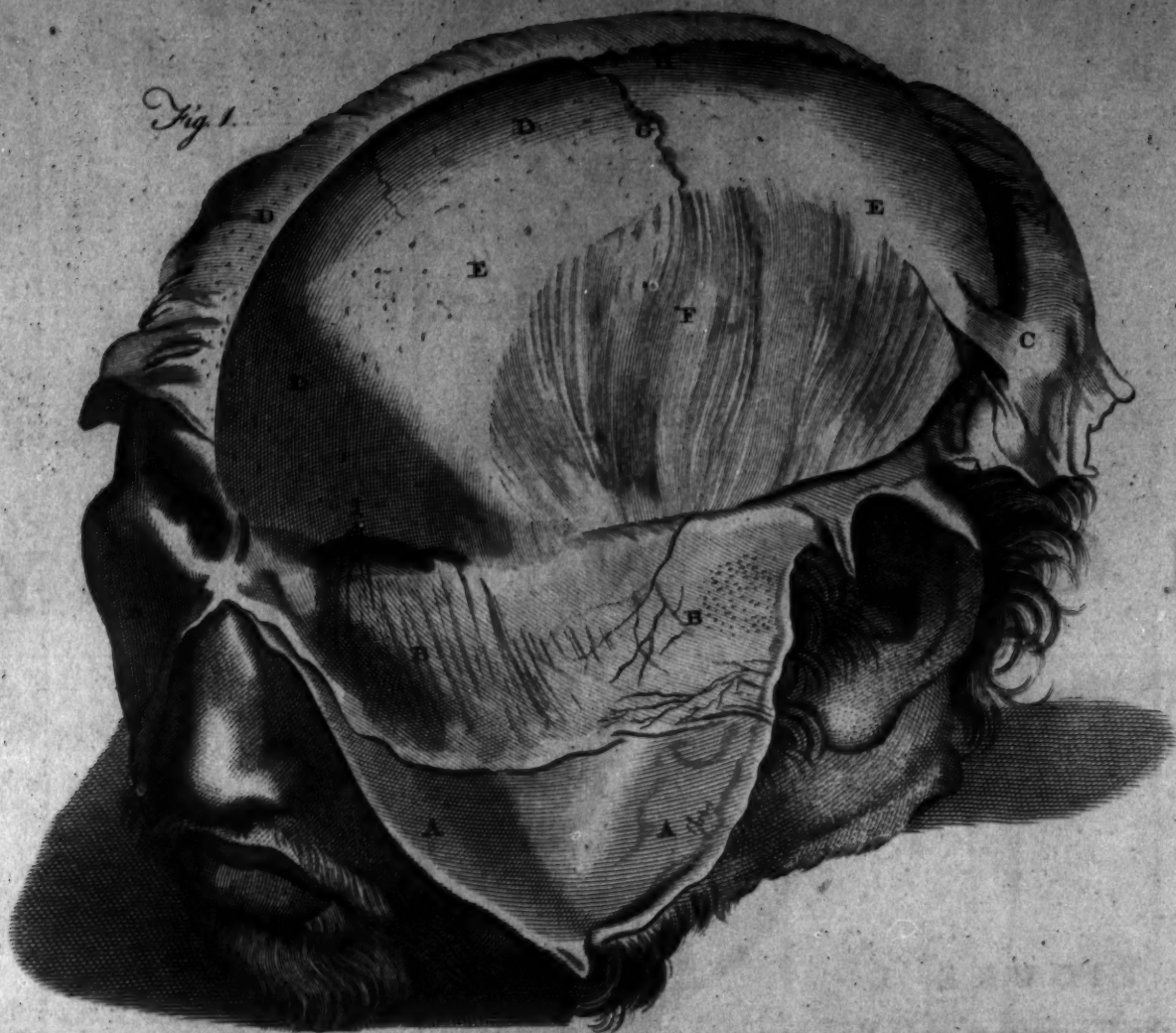
E X P L A I N E D.

A VIEW of the muscles in action on the posterior part of the Body, the Teguments being removed.

- | | |
|--|--|
| 1. The musculus temporalis. | 23 23. The extensor minimi digiti, on each side. |
| 2. The orbicularis palpebrarum. | 24 24. The extensor carpi ulnaris, on each side. |
| 3. Part of the zygomaticus major. | 25 25. Part of the flexor sublimus. |
| 4. The depressor anguli oris. | 26 26. The flexor carpi ulnaris, on each side. |
| 5. The masseter. | 27. Part of the tendons of the flexor carpi radialis and |
| 6. Part of the sterno-mastoideus. | palmaris longus. |
| 7. Part of the levator scapulae. | 28 28. The adductor minimi digiti, on each side. |
| 8. Part of the splenius. | 29. The adductor pollicis. |
| 9. Part of the occipitalis. | 30. The extensor muscles of the thumb. |
| 10 10. &c. The cucullaris or trapezius, on each side. | 31 31. Part of each obliquus descendens abdominis. |
| a The os parietale. | 32. The gluteus maximus. |
| b The os occipitis. | 33 33. Part of the gluteus medius. |
| c Part of the sagittal suture. | 34. The tensor vaginae femoris. |
| d The lambdoidal suture. | p p The back-part of the spine of each os ilium. |
| e The zygoma. | q The os sacrum. |
| f The parotid gland. | r A prominence made by the great trochanter under the |
| g The spinous process of the seventh vertebra of the neck. | tendon of the gluteus maximus. |
| h h The tendons of the cucullaris, on each side, inserted | s s The nervus popliteus, on each side. |
| to the spine of the scapula. | t The upper end of the fibula. |
| i i The extremity of the spine of the scapula, on each side, | u u The lower end of the fibula, called Malleolus ex- |
| to which the clavicle is connected. | ternus. |
| k k The lower angles of the scapulae. | w The lower end of the tibia, or malleolus internus. |
| l l The basis of each scapula. | x The tendon of the gastrocnemius, or tendo Achillis. |
| m m The upper end of each ulna, called Olecranon. | y The os calcis. |
| n n The external protuberance of each os humeri. | 35 35. Part of each vastus externus. |
| o o The inferior extremity of the ulna. | 36 36. The biceps flexor cruris, on each side. |
| 11. The musculus deltoides, on the right-side. | 37 37. The semitendinosi. |
| 12 12. The infra spinati. | 38 38. The semimembranosi. |
| 13 13. Part of the teretes minores. | 39 39. The triceps adductor femoris, on both sides. |
| 14 14. The teretes majores. | 40. Part of the gracilis. |
| 15 15. The latissimi dorsi. | 41. Part of the sartorius. |
| ** Their tendinous parts passing over the sacrolumbales | 42. Part of the vastus internus. |
| and longissimi dorsi. | 43 43. The gastrocnemii externi. |
| 16 16. Part of the rhomboides. | 44 44. The gastrocnemii interni, covered with the ten- |
| 17 17. The triceps extensor cubiti, on each side. | dons of the externi. |
| 18 18. Part of the brachiales interni. | 45. The peroneus longus. |
| 19 19. Part of the supinator radii longus, on both sides. | 46 46. The abductor minimi digiti, on each side. |
| 20 20. The anconeus. | 47. Part of the extensor digitorum longus, on the right- |
| 21 21. The extensor carpi radialis, on each side. | side. |
| 22 22. The extensores digitorum communes. | |

T H E





T H E

Seventh Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

FIGURE I.

A VIEW of the Teguments and other parts on the outer side of the Cranium.

A A A The hairy scalp cut in a crucial direction, and turned down.

B B The fore-part of the occipito-frontalis muscle, with its tendinous expansion cut and turned down.

C A portion of the tendon of the occipito-frontalis adhering to the pericranium.

D D D The pericranium raised and turned to the right-side. The small dots express the cut extremities of blood-vessels of that membrane and of the skull.

E E The ossa frontis and parietale.

F The upper part of the temporal muscle, divested of its aponeurosis.

G Part of the coronal future.

H The sagittal future.

I The frontal vessels and nerves passing through the foramen supra orbitarium.

FIGURE II.

The upper part of the Brain in situ, with its Membranes, the top of the Skull being removed.

A A The dura mater covering the brain on the right-side.

B B The left hemisphere of the brain covered with the pia mater only, the circunvolutions of the brain appearing distinctly through it.

C C The dura mater on the left-side divided and reclined laterally.

D D A faint appearance of the brain through the dura mater.

E The blood-vessels of the dura mater.

F That part of the dura mater which was contiguous to the coronal future.

G G The veins of the brain entering the superior longitudinal sinus.

H H The cut edge of the skull.

T H E

Eighth Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

GIVES different Views of the Dura Mater and its Blood-vessels.

FIGURE I.

The upper and fore part of the Dura Mater as it appears after the Skull has been removed.

- A A The cut edge of the fore-part of the skull.
- B Part of the temporal muscle.
- C C The dura mater covering the two hemispheres of the brain.—The dark line behind these letters corresponds with the coronal future, at which place the adhesion is greatest.
- D D The lacerated extremities of vessels which run between the dura mater and skull.
- E E The blood-vessels of the dura mater.
- F F The superior longitudinal sinus opened, from near its origin at the crista galli, to near its termination in the lateral sinuses.

FIGURE II.

The upper and back part of the Dura Mater.

- A A The superior longitudinal and left lateral sinus laid open.
- B B The os occipitis turned back.
- C The left os petrosum.
- D The orifice of the fourth sinus, called Torcular Herophili, at the junction of the longitudinal and lateral sinuses.
- E Some of the strong transverse ligaments situated within the lateral sinus.
- F F Termination of veins of the brain in the superior longitudinal sinus.
- G G That part of the dura mater which adhered strongly to the lambdoidal future.
- H The medulla oblongata going out through the foramen magnum occipitis.
- I The cerebellum covered with the dura mater.

FIGURE III.

- A Part of the superior longitudinal sinus opened.
- B B The veins of the brain running towards the sinus.
- C C Their terminations within the sinus.

FIGURE IV.

A view of the posterior and lateral parts of the Dura Mater, &c.

- A A The posterior and lateral part of the dura mater covering the brain; various branches of blood-vessels are seen running upon it.
- B B The os petrosum turned back.
- C Part of the os occipitis separated from the cranium.
- D The left lateral sinus opened.—In this the ligaments expressed in Fig. 2. E, are seen.
- E The specus or cavity in the temporal bone, which receives the varicose part of the lateral sinus, or beginning of the internal jugular vein.
- F The internal jugular vein, represented too small.
- G A probe introduced by the sinus into the vein.
- H The varicose part of the sinus mentioned above.

FIGURE V.

Represents the termination of the Lateral Sinus, and beginning of the internal Jugular Vein.

- A A Part of the lateral sinus.
- B B The dura mater which covered the sinus cut open and expanded.
- C The varicose part of the sinus which lay in the specus of the temporal bone.
- D D D The filaments of the dura mater broken off.
- E The beginning of the internal jugular vein.

FIGURE VI.

The course of the internal carotid artery through the base of the cranium.

- A The artery passing towards the brain.
- B C Part of its membrane received from the dura mater, separated and turned back.
- D D The lower part of the artery next the heart.

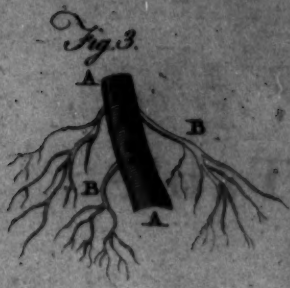


Fig. 2.

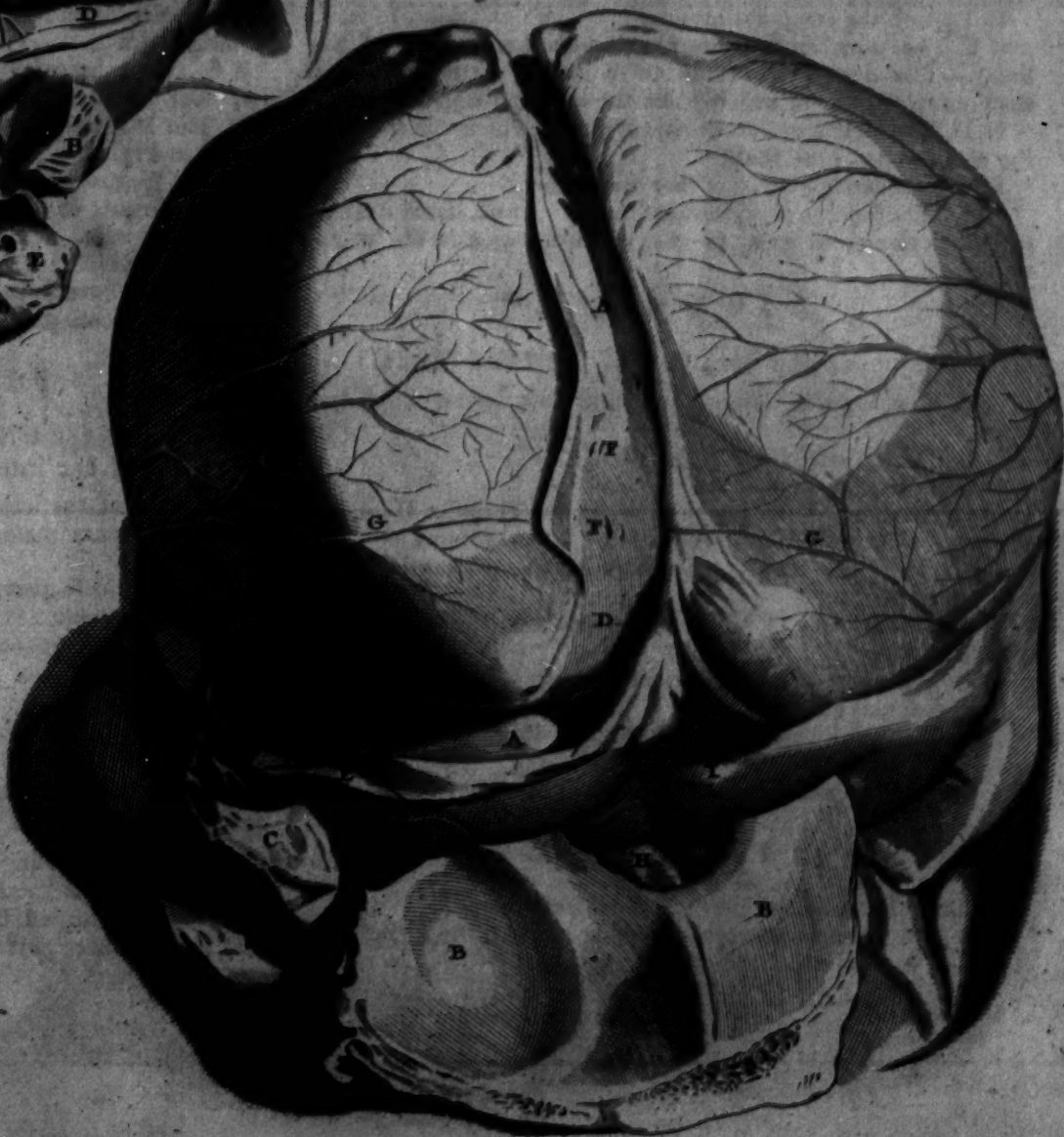


Fig. 5.



Fig. 1.



Fig. 2.



T H E

Ninth Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

FIGURE I.

THE back-part of the Brain, and upper part of the Cerebellum.

AA The posterior lobes of the brain raised and drawn forwards.

BC Ligatures and pieces of wood supporting the brain in this position.

DD Folds of the dura mater.

EE The left lateral process of the dura mater cut, to show F The cerebellum.

GH The right lateral process covering the corresponding part of the cerebellum.

III The cut edge of the os occipitis.

KK The common integuments of the head.

FIGURE II.

The Cerebellum raised from its cavity in the Occipital Bone.

AA The cerebellum drawn towards the sella turcica.

BB The back-part of the medulla oblongata in its passage through the foramen magnum occipitis.

b The processus vermiciformes of the cerebellum.

CCG Roots of the eighth, ninth, and part of the tenth pair of nerves.

a a The accessory nerves accompanying the eighth pair, at their egress.

DD, &c. The dura mater.

EE, &c. The edge of the skull.

FF The integuments dissected.

G Part of the pericranium raised.

H The left-ear.

T H E

T H E

Tenth Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

VIEWS of the Brain and Dura Mater.

FIGURE I.

The Falx and some other parts of the Dura Mater dried.

- A A The falx supported so as to show its figure and extent.
 B B The superior longitudinal sinus opened.
 C The situation of the inferior longitudinal sinus.
 D D Veins running to, and their situation in the superior longitudinal sinus.
 E The beginning of the superior longitudinal sinus at the crista galli.
 F F The left lateral sinus.
 G G Part of the tentorium which lies between the brain and cerebellum.
 H H, &c. Instruments used to support the membrane in drying it.

FIGURE II.

Parts of the above-mentioned Sinuses distended; but they are represented much smaller than nature; nor is their situation, with respect to each other, properly attended to.

- A The longitudinal sinus.
 B B The two lateral sinuses.
 C The fourth sinus, or Torcular Herophili.
 D A large vein which terminates in the union of the sinuses.
 At the sides of the sinuses, the dura mater is spread out.

FIGURE III.

The connection of the Falx with the Crista Galli of the Ethmoid Bone.

- A The cribriform plate of that bone.
 B The crista galli.
 C The beginning of the falx adhering firmly to the crista galli.

FIGURE IV.

The Falx dried.

- A The fore-part of the falx.
 B The back-part.
 C The lower part, where the inferior longitudinal sinus is situated.
 D D Veins of the brain running to the superior longitudinal sinus.
 E The triangular appearance of this sinus when cut across.
 F Part of the dura mater which covered the left hemisphere of the brain. The continuation of this part is seen farther back, supported upon the uppermost pins.
 G G The dura mater covering the upper part of the superior longitudinal sinus.

FIGURE V.

A view of the upper part of the Brain and Cerebellum, after being removed from the head, and laid upon their basis.

- A A The two hemispheres of the brain.
 B B The cerebellum covered with the dura mater.
 C The processus vermiformis.
 D The medulla oblongata cut across.
 E F The fissure between the hemispheres where the falx is situated.
 G G Part of the tunica arachnoides and pia mater separated, and turned to one side.
 H H I I K K L The surface of the brain divided into various convolutions, and these covered by the pia mater, and tunica arachnoides, upon which numerous blood-vessels are spread. The largest of these are veins, the trunks of which are seen running towards the superior longitudinal sinus, which is here separated.
 M M Blood-vessels of the pia mater.

T H E

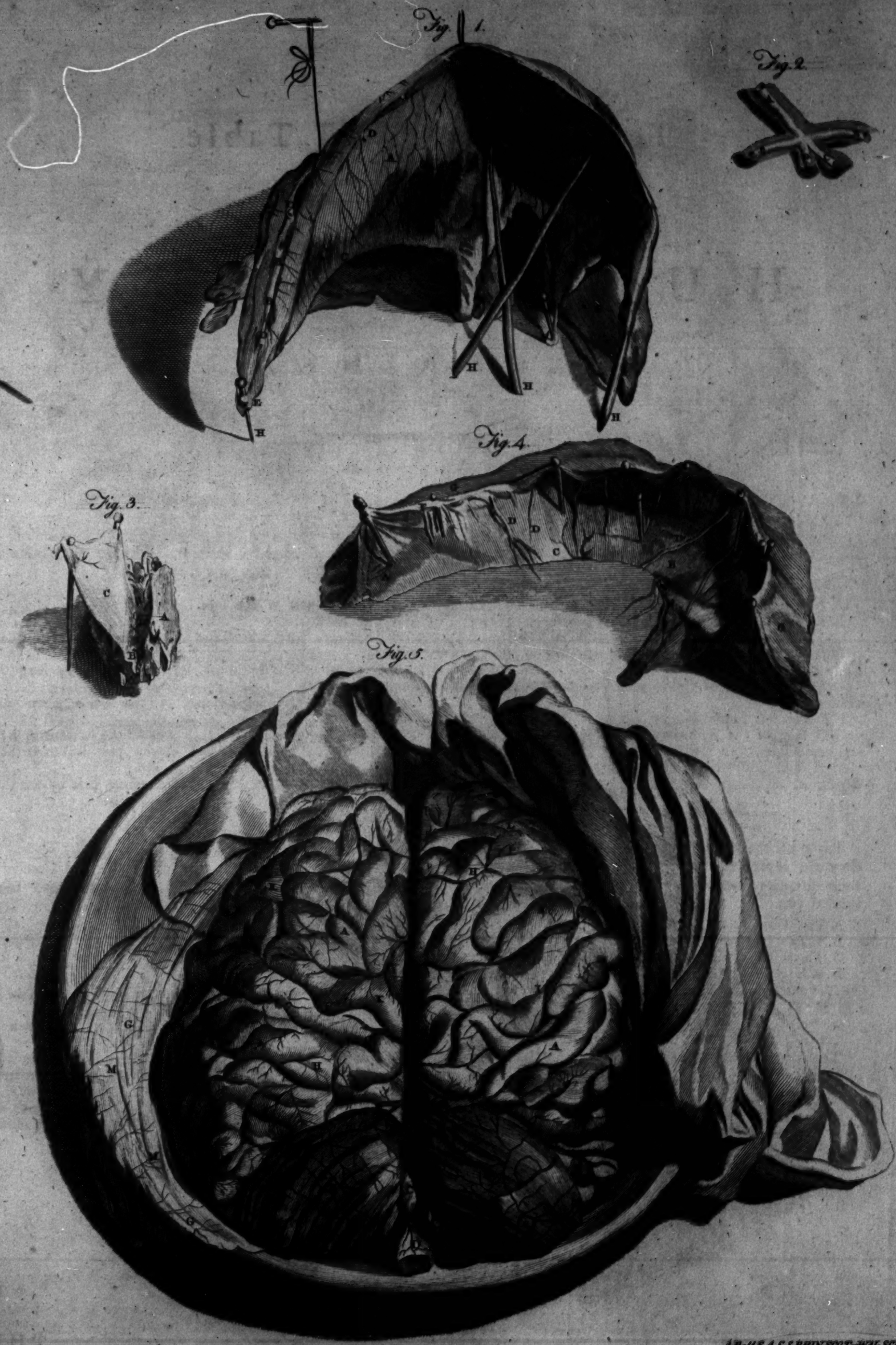


Fig. 1.

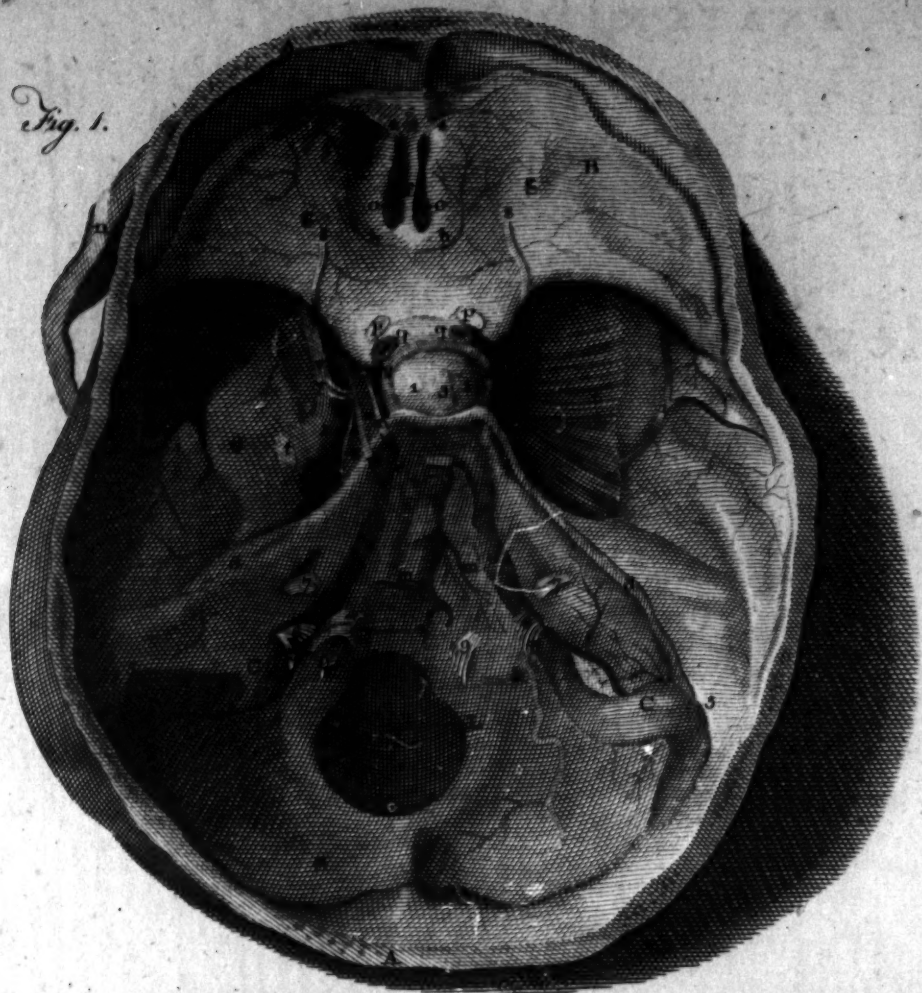
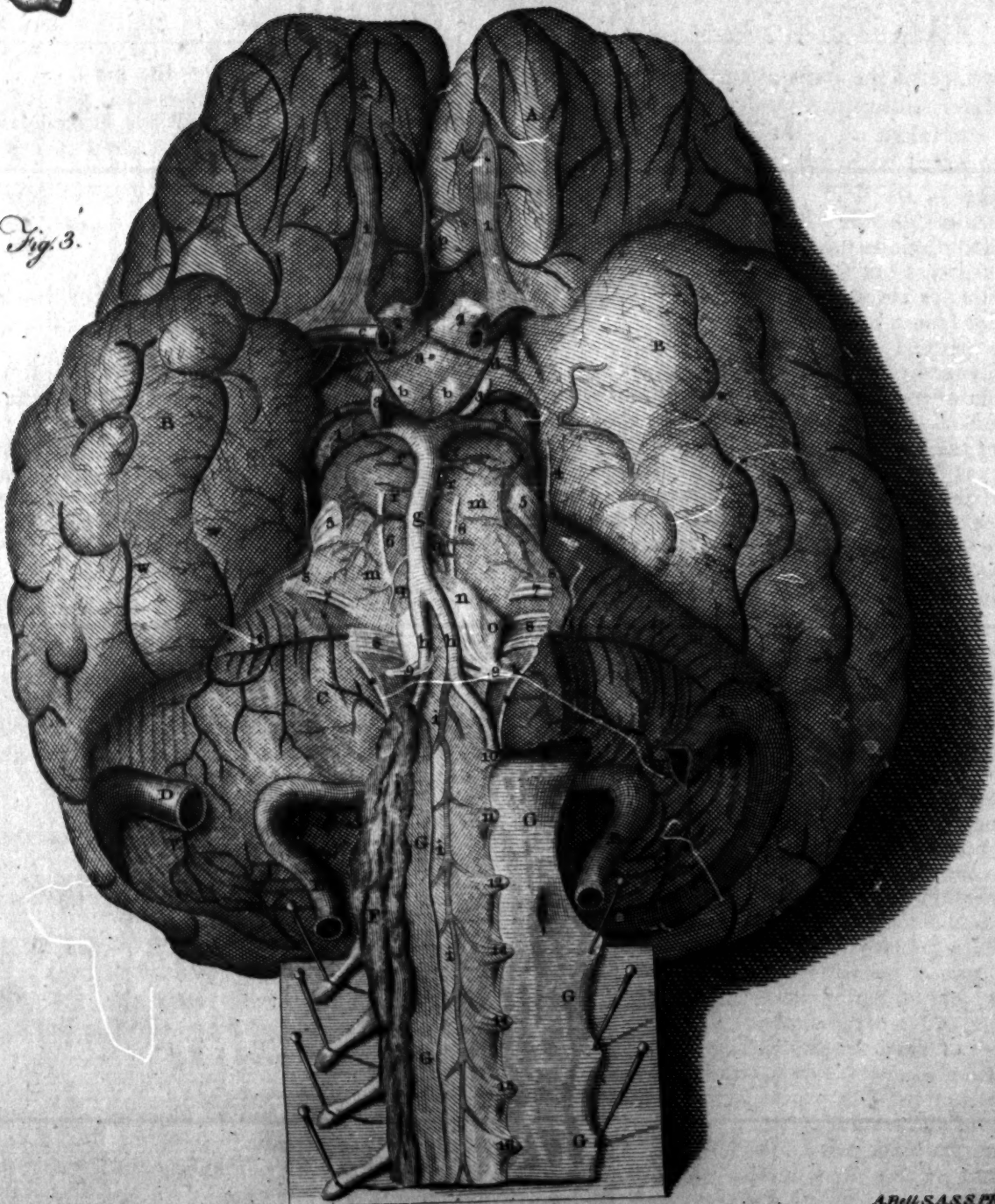


Fig. 2.



Fig. 3.



T H E

Eleventh Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

FIGURE I.

INTERNAL surface of the basis of the Cranium, with the Dura Mater lining it, represented immediately after the Brain was taken out; the Blood-vessels having been previously injected with wax.

- A A The cut edge of the skull.
 B B The dura mater-adhering to the base of the skull.
 C C The two lateral sinuses filled with wax in the course of their passage to their egress at the base of the skull.
 d d The two superior petrosal sinuses, which communicate between the circular sinus 2 2, and lateral sinuses.
 e e Two inferior petrosal sinuses, which also discharge themselves into the two lateral ones at their egress.
 f The *Crista Galli*, or middle process of the æthmoid bone.
 g g Several blood-vessels of the dura mater.
 h h The anterior arteries of the dura mater.
 i i The middle or principal arteries of the dura mater. After these arteries enter the skull, their larger branches lie on the exterior surface of the dura mater, and run in furrows on the internal surface of the cranium.
 k The third branch of the arteries of the dura mater, which enters the cranium where the eighth pair of nerves pass out.
 L The foramen magnum of the os occipitis, through which the medulla oblongata passes to the spinal canal.
 m m Some veins of the dura mater which communicate with the inferior petrosal sinuses.
 n Part of the zygoma.
 o o The os æthmoides, through which the olfactory nerves pass out of the cranium.
 p p The optic nerves cut off at their egress.
 q q The large branches of the carotid arteries cut off at their entrance into the cavity of the skull.
 r One of the nerves of the third pair on the left-side, dissected from the duplicature of the dura mater, in which it passes before it goes out of the skull with the following pair.
 s s The fourth pair of nerves freed from the above-mentioned duplicature, and turned back at their passage through the foramen lacerum of the os sphenoides.
 t t The fifth pair of nerves expanded before its division into three branches. On the opposite side its trunk is entire.
 v The first branch of the fifth pair of nerves on the left-side, before it passes out of the cranium.
 w The nerve of the sixth pair on the left-side, disengaged from the duplicature of the dura mater, in which it is inclosed for a considerable way before it accompanies the third, fourth, and anterior branch of the fifth pair of nerves, at its egress.

PART. III.

x The intercostal nerve of the left side, formed of two branches from the fifth pair, (as represented by Cowper), and united with the body of the sixth.

y The two branches of the fifth pair of nerves, which contribute to the formation of the intercostal nerve.

z z The contortion of the carotid artery near the sella turcica.

1 1. The pituitary gland situated in the sella turcica.

2 2. The circular sinus or vein surrounding the pituitary gland.

3. The infundibulum.

4 4. Two arteries which pass out of the cranium to the glandular membranes of the foramina narium, and adjacent parts.

5 5. The bended portions of the lateral sinuses, as they pass that part of the cranium where the ossa temporum, os parietale, and os occipitis, meet.

6. Part of the dura mater raised, and turned to a side, to shew the progress of the third, fourth, fifth, and sixth pair of nerves.

7 7. The portio mollis and portio dura of the auditory, or seventh pair of nerves, entering the os petrosum.

8 8. The eighth pair of nerves, or par vagum, together with the accessory nerves (x x) accompanying them at their egress.

FIGURE II.

The Trunk of the Fifth Pair of Nerves, with its ganglion, and division into three branches.

A The trunk.

B Its ganglion.

C D E Its first, second, and third branches.

FIGURE III.

The basis of the Brain, with the large trunks of its arteries and veins injected with wax; some of their branches being freed from the Pia Mater, together with the Ten Pair of Nerves of the Brain, and a portion of the Spinal Marrow, &c.

A A The anterior.

B B The lateral lobes of the brain.

C C The cerebellum.

D D The two lateral sinuses cut off, where they pass through the base of the cranium.

E E The trunks of the vertebral arteries as they pass the transverse processes of the first vertebra of the neck, in their

their winding progress through the foramen magnum of the occipital bone to the medulla oblongata and brain.

F The vertebral sinus or large vein, in the external membrane of which the wax is extravasated, whence it appears with an unequal surface, as here expressed.

G G G G G Continuation of the dura mater divided longitudinally, one side lying on the medulla spinalis, the other raised and pinned out.

a The mouth of the infundibulum.

b b Two white protuberances behind the infundibulum, commonly called Corpora albicantia.

c c The trunks of the internal carotid arteries cut off, before they reach the brain.

d d Two communicating branches between the carotid and vertebral arteries, forming a part of the circle of Willis.

e e e e The divisions of the vertebral artery supplying the cerebellum, &c. From the anterior of these, chiefly arise the arteries of the choroid plexus;—from the two posterior arise these branches which go to the choroid plexus of the fourth ventricle of the brain.

f Two small branches of the carotids.

h h The two trunks of the vertebral arteries which form the basilar artery.

i i The spinal artery not distended like the rest.

k A small branch of an artery running between the fasciculi of the nerve of the ninth pair, on the right-side, near their origin.

l l Portions of the crura of the medulla oblongata, immediately before they meet at their conjunction under the Pons Varolii.

m m The annular protuberance, or Pons Varolii.

n That part of the medulla oblongata on the left-side, called Corpus pyramidale.

o That part on the same side, called Corpus olivare.

p A branch of the carotid arteries which passes between the two anterior lobes of the brain, from whence some small branches go off, which accompany the olfactory nerves at their egress through the cribriform bone.

q q Small branches from the basilar artery running under the pia mater, which covers this part, and sometimes proceeding further to the choroid plexus in the fourth ventricle and cerebellum.

r r r r Other branches passing into the tuber annulare.

s s The two first medullary processes of the cerebellum, which are continued to the tuber annulare, and seem to form part of it.

t t Veins on the cerebellum, the progress of which differs much from those of the brain itself.

v v v Other veins variously distributed over the cerebellum, which empty themselves into the lateral sinuses.

w w w w The *fulci* of the brain, in which large branches of veins, and sometimes of arteries, may be seen.

x x x Their capillary branches as they appear under the pia mater on the external surface of the brain.

From 1 to 10. The ten pair of nerves of the brain.

From 11 to 16. Six of the cervical nerves.

** The accessory spinal nerves, as they ascend under the vertebral arteries to the eighth pair.

Fig. 1.

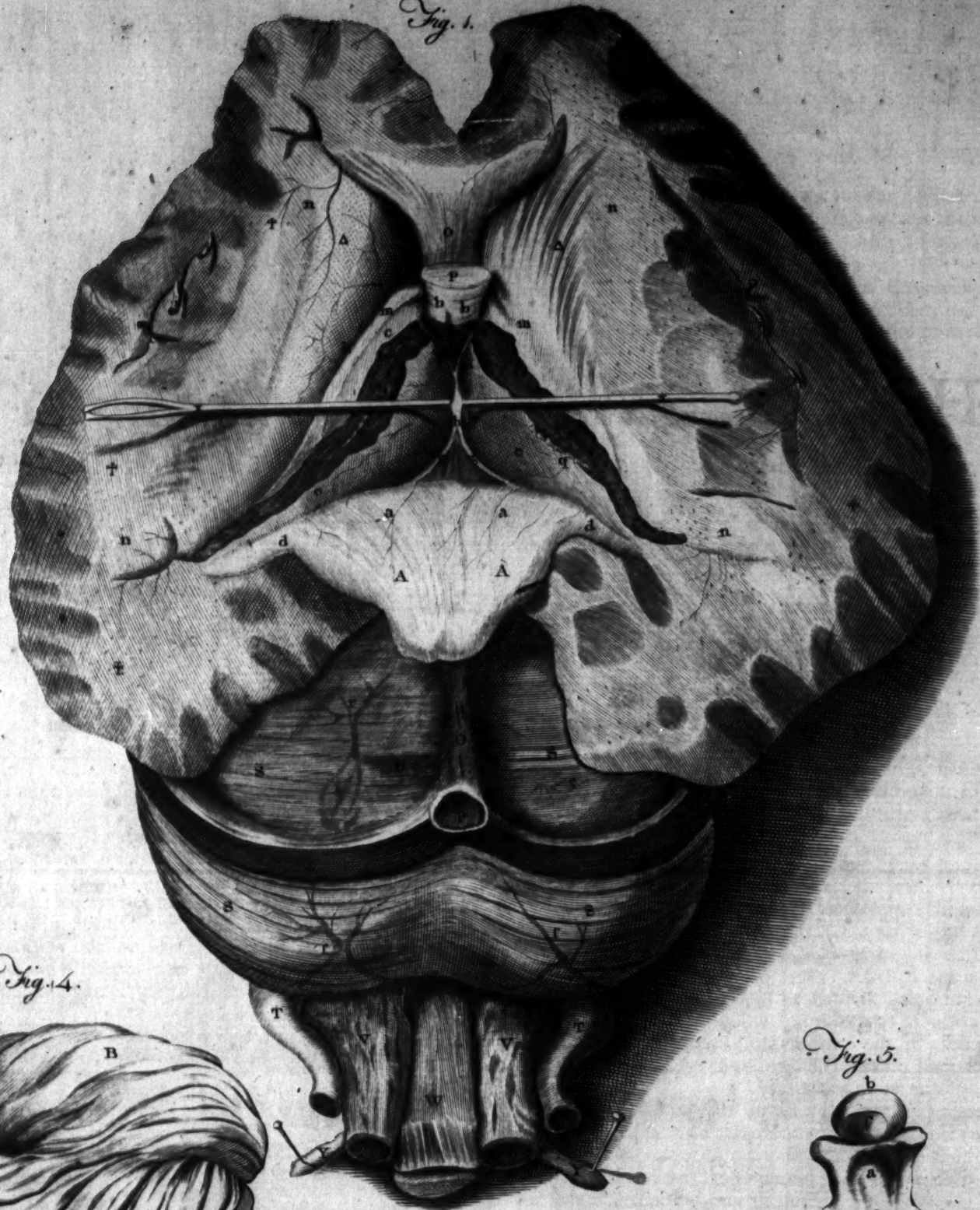


Fig. 4.

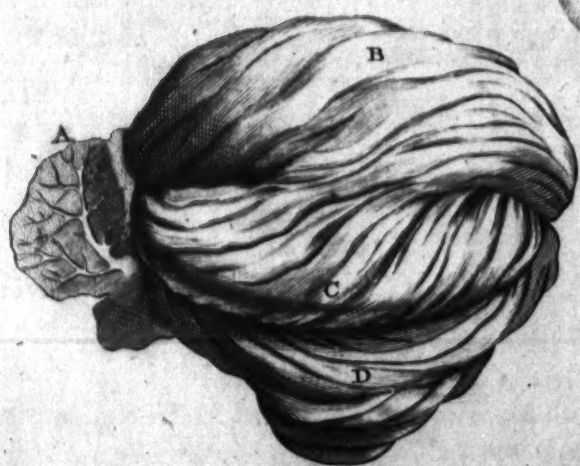


Fig. 5.



Fig. 2.

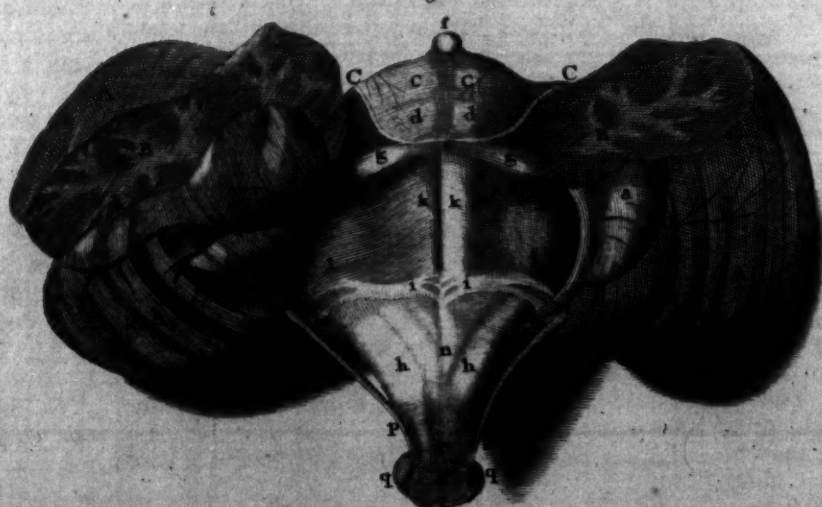
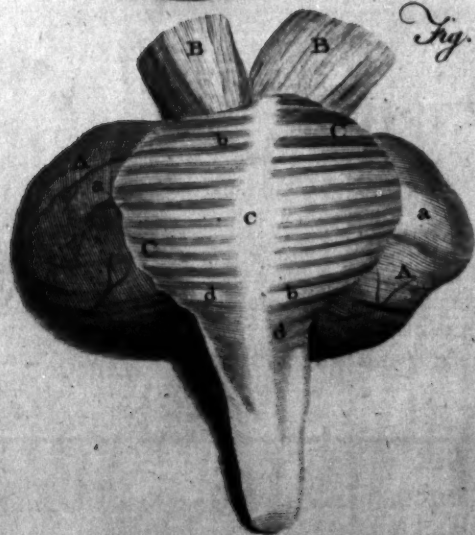


Fig. 3.



T H E
Twelfth Anatomical Table
O F T H E
H U M A N B O D Y
E X P L A I N E D.

FIGURE I.

THE Brain lying on its base, after its two Hemispheres are cut off, and the arteries and veins injected with wax; the Cerebellum remaining entire.

A A The inferior part of the fornix cut off from its roots b b, and turned back, part of the corpus callosum remaining on it.

a a Blood-vessels appearing on this surface of the fornix.

b b The roots of the fornix.

c c The thalami optici, or origin of the optic nerves.

Δ Δ The corpora striata, that of the left-side remaining entire, the right being divided, to shew its *stria*.

d d The crura of the fornix, where they begin to wind down on the sides of the crura medullæ oblongatæ.

e e The choroid plexus, the arteries of which arise from the first branches of the vertebral artery.

f The meeting of the plexus, at the root of the fornix, where its two veins pass to the other part of it, g g.

g g The other part of the choroid plexus, the arteries of which arise from the second branches of the vertebral artery, joined with the first by communicating branches, which are not seen here, as they lie under the crura fornix, d d.

h h Two veins which arise from the upper parts of the choroid plexus, and pass the third ventricle to the other part of the same plexus, g g, near the testes.

iiiiii Branches of the carotid arteries cut off, as they appear injected with wax, and passing between the cortical foldings of the brain.

k A branch of a vein running along the corpus striatum of the left-side, and discharging itself into the veins of the choroid plexus, the left being removed to shew the *stria*.

l Part of the *rima* of the third ventricle, which appears under the vein, h.

m A long medullary tract between the corpus striatum and optic thalamus, called by Willis *Processus medullaris transversus*.

n n n n The *Centrum ovale* of Vieussens.

o That part of the corpus callosum, called the Fornix vera, between which and the fornix, p, is placed the septum lucidum, dividing the anterior part of the right ventricle of the brain from the left. This septum is a continuation of the internal membrane which invests the two lateral ventricles.

O The fourth sinus of the dura mater, called Torcular Herophili, filled with wax.

P The longitudinal sinus cut off, where it meets the two lateral sinuses.

Q Q The two lateral sinuses also distended with wax.

R A vein filled with wax, on the tentorium cerebelli.

r Some branches of veins as they appear on the tentorium, or second process of the dura mater.

p The fornix cut off near its two roots.

q q A supposed appearance of lymphatics upon the choroid plexus.

SSSS The cerebellum covered with the second process of the dura mater on the upper, and with the dura mater itself on the under part.

f f Some branches of veins which appear on the dura mater, covering the back part of the cerebellum, differing in their course from those subjacent vessels on the pia mater, which are immediately distributed on the cerebellum itself, and appear faintly in those strokes running somewhat parallel with the lateral sinuses.

T T Parts of the vertebral arteries.

V V The vertebral sinuses, on which the wax appears extravasated.

W W The posterior part of the medulla oblongata covered with the dura mater.

X X A probe supporting the large veins of the choroid plexus in the third ventricle of the brain.

† † † The medullary part of the brain.

*** The cineritious part.

FIGURE II.

The back part of the Cerebellum cut through, and reclined laterally,—with a portion of the Spinal Marrow.

A A A The cerebellum covered with the pia mater only, where its circular furrows, in which its large blood-vessels pass, are expressed, together with several ramifications of blood-vessels, which decussate those of its furrows, as they pass under the pia mater.

B B Distribution of the branches of the medullary part of the cerebellum, as it appears when divided.

C C The fourth pair, or two pathetic nerves, near their origin.

c c The testes.

d d The testes, on the surface of which blood-vessels appear distributed under the pia mater.

f The pineal gland.

g g The first processes of the cerebellum passing to the testes.

e The transverse process uniting the two first processes of the cerebellum, from whence the pathetic, or fourth pair of nerves arise.

h h The third or cordal processes arising from the cerebellum, and descending on both sides of the medulla oblongata.

i i Some *stria* appearing in the fourth ventricle of the brain, and

and which contribute to the formation of the medullary trunks of the auditory nerve.

- k k l l n The fourth ventricle opened.
- o Origin of the medulla spinalis.
- p p The accessory nerves.
- q q Those parts of the tenth pair of nerves which arise from the posterior part of the medulla spinalis.
- m m Parts of the eighth pair of nerves, where they meet the accessory nerves.

FIGURE III.

- A A Part of the cerebellum.
- B B The crura of the medulla oblongata cut off from the brain.
- C C The tuber annulare divided through the middle, its external surface being cut off.
- b b Cineritious and medullary striæ which appear in this section of the tuber annulare.
- c The middle medullary tract to which the lateral striæ run.
- d d The cineritious part of the medulla oblongata under the corpora pyramidalia: In this section the corpora olivaria are divided.
- e The left cordal process partly in situ.

FIGURE IV.

Represents one of the hemispheres of the Cerebellum expanded in two or three places, to shew the deep circles of which its surface is composed.

A Portion of the section by which this hemisphere of the cerebellum is divided from the other.

B C The surface of two deep circles, which in the natural state are in contact, but which are here separated, that those segments of circles into which they are distributed may appear, and to shew how some of these are intermixed, and others extended from one of these surfaces to the other.

D The surface of the other circle, in which the segments of the circles appeared with more elegance, and more parallel one to another, than is here expressed.

FIGURE V.

Shews the Posterior Surface of the Sella Equina viewed anteriorly, with the Pituitary Gland removed from its place.

- a Posterior surface of the sella, concave in the middle.
- b Pituitary gland, with its appendix, taken from the sella, and inverted.
- c Appendix of the pituitary gland.

THE

Fig. 1.

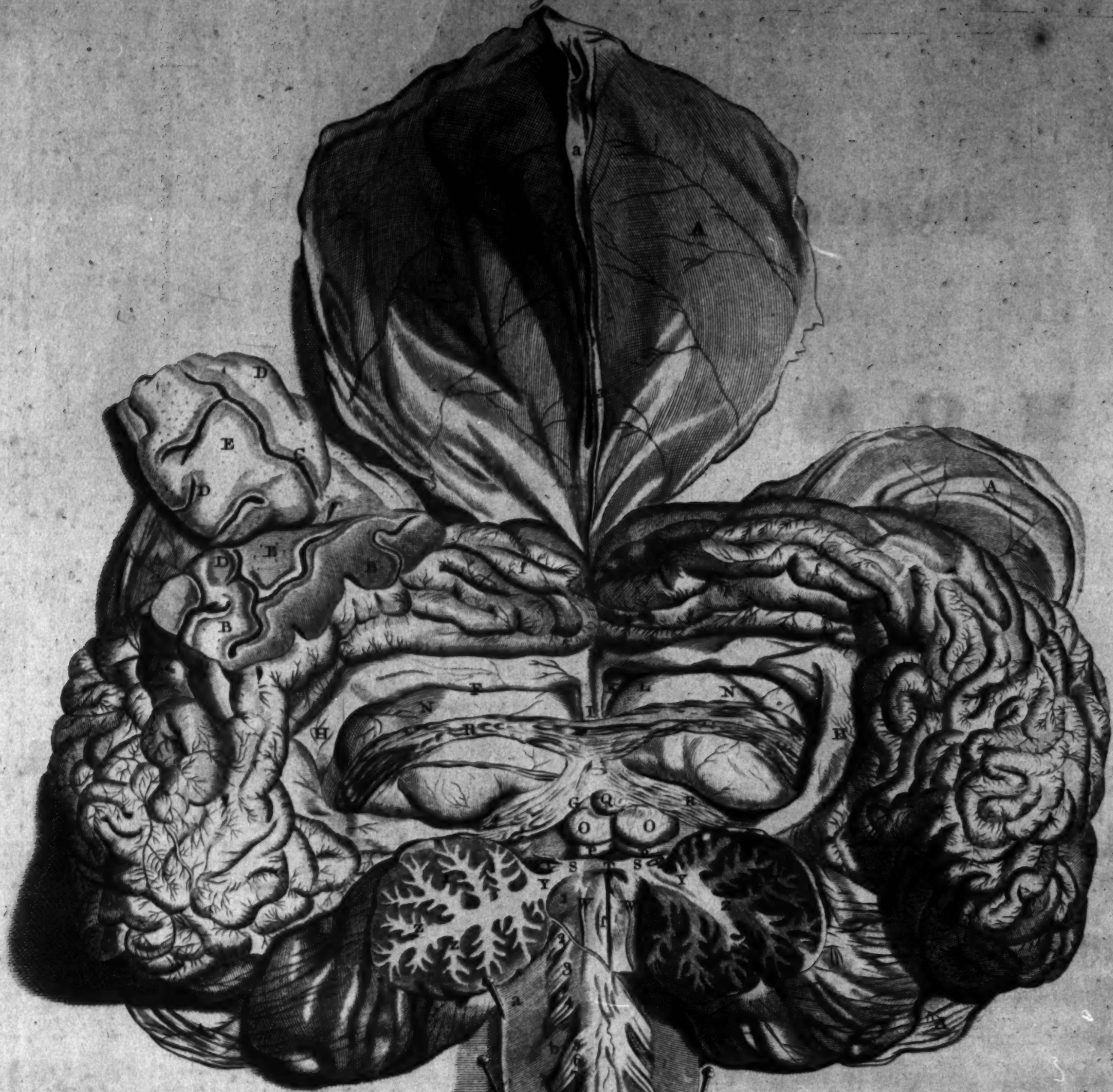


Fig. 3.



Fig. 2.

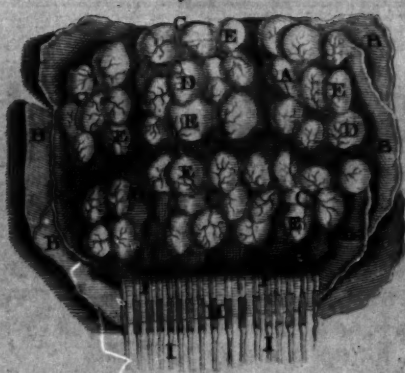


Fig. 4.



continued Tab. 14. Fig. 2.

AB. U.S.A.S. S. PRIN. SCULPTOR. WAL. SCULPTOR. fecit.

T H E

Thirteenth Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

FIGURE I.

A VIEW of the Brain, Spinal Marrow, &c. separated from the Bones.

- A A The dura mater cut and turned forwards.
 a a Part of the falx.
 B B Part of the brain cut transversely.
 C Separation of the convolutions from each other.
 D D The cortical or cineritious part of the brain.
 E E The medullary part.
 f f The back-part of the brain which was supported by the tentorium.
 F G H The two lateral ventricles opened; where the blood-vessels of the pia mater which line them may be seen.
 F Their large upper and fore part.
 G Their small under and back part.
 H H The corpus callosum.
 I K The roots of the fornix.
 L The right thalamus nervi optici; the left not being lettered.
 M The corpus transversale of the corpus callosum.
 N N The corpora striata.
 O O The nates.
 P P The testes.
 Q The glandula pinealis.
 R The plexus choroides.
 S S The first processes of the cerebellum going to the nates.
 T A transverse process joining the fourth pair of nerves and last mentioned process.
 s The fourth ventricle.
 V V The pathetic, or fourth pair of nerves.
 W W Two processes of the spinal marrow which compose the sides of the fourth ventricle.
 X Y Z The arbor vitæ, or medullary part of the cerebellum, shewn by a perpendicular cut through that substance.
 a b, a b, &c. The dura mater which incloses the spinal marrow, slit open and turned back.
 c c The pia mater adhering to the dura mater, and inclosing the medulla spinalis, but raised on a probe, where it invests the cauda equina.—See Tab. XIV.

1 2 3, &c. The origin of the spinal nerves and their passage through the dura mater. The first of these passes out between the os occipitis, and first vertebra of the neck—and is reckoned the tenth of the brain: The rest go out between the vertebrae of the neck, back, loins, and perforations of the os sacrum, successively.

FIGURE II.

- A A Part of the brain boiled, and viewed through a microscope.
 B B The three membranes of the brain separated.
 C D The distribution of the blood-vessels.
 E E A granulated appearance on the surface of the brain.
 F F What have been considered as tubes derived from these.
 H H Complicated tubular appearances.
 I I Nervous fibres arising from these.

FIGURE III.

Part of the Choroid Plexus delineated by the help of a magnifying glass.

- A A The membranes which inclosed the vessels separated.
 B C The blood-vessels injected.
 D D An appearance of lymphatic vessels somewhat distended with air.
 E Nervous tubuli, as described by *Bidloo*, but not observed by other Anatomists.
 F F Vesicular bodies which have been considered by some as glands.

FIGURE IV.

A Nerve as viewed through a microscope.

- A A branch of one of the cervical nerves.
 B The blood-vessels passing in the nervous fibrillæ.
 C D E The fibres into which the nerve divides at its termination.

T H E

Fourteenth Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

FIGURE I.

Is a Continuation of Fig. First, Plate Thirteenth.

FIGURE II.

A Portion of the Medulla Spinalis cut in a longitudinal and lateral direction, and expressed somewhat larger than nature.

A A D D The upper part of the spinal marrow.

B B The fore and back part.

C C The nervous fibrillæ arising from the fore and back parts.

E E Portions of the dura mater left to show the passage of the nerves through it.

F F F Ganglia formed by the nerves at their egress from between the vertebrae.—Beyond the ganglia, the trunks of the nerves are seen.

FIGURE III.

A Portion of the Medulla Spinalis cut off about the third Vertebra of the Back.

A The upper part.

B B The dura mater expanded.

C C The nervous fibrillæ arising from the fore and back parts of the spinal marrow.

D The nervous fibrillæ collectively passing through the dura mater.

E One of the ganglia at the beginnings of the nerves.

F A section of the spinal marrow.

G Some vestiges of blood-vessels on the outside of the spinal marrow.

FIGURE IV.

A Portion of the Medulla Spinalis taken out of the Vertebrae of the Back, together with its membranes.

A A The back part of the spinal marrow.

B B C The sheath which lines the spinal canal, raised and supported by a probe.

D D The dura mater which lies within the sheath, and covers the spinal marrow.

E E E Various fatty substances which are situated between this sheath and the dura mater.

F F, &c. The spinal nerves passing through the dura mater.

FIGURE V.

The Inferior Surface of the first Vertebra of the Thorax.

A Its spinous process.

B B Its oblique or articulating process.

C C The transverse process.

D The body of the vertebra.

E The great foramen for the passage of the spinal marrow.

F F Fatty mucilaginous substances which are continued through the whole of the spinal canal.

T H E

Continuation of Fig. 1. Tab. 13.

Fig. 4.

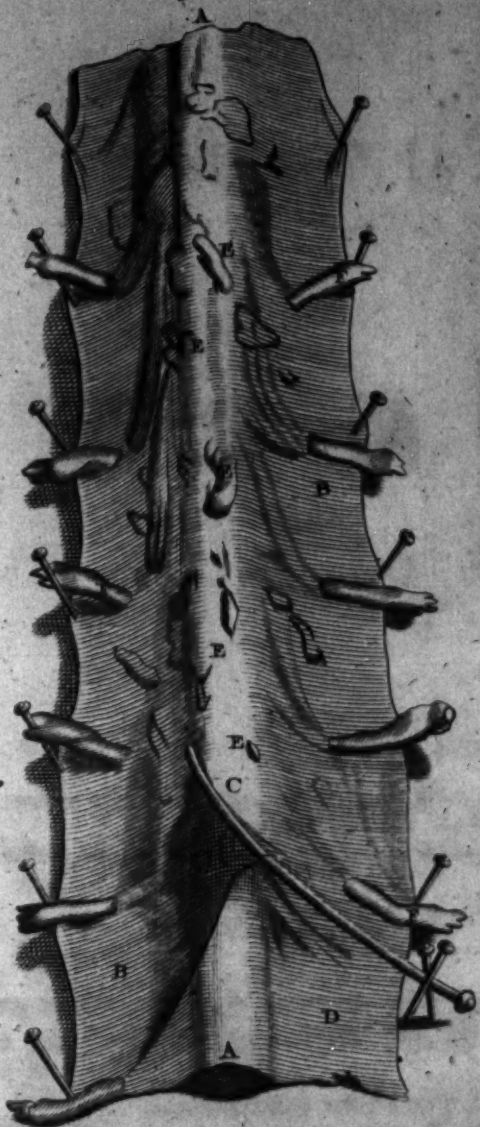


Fig. 2.

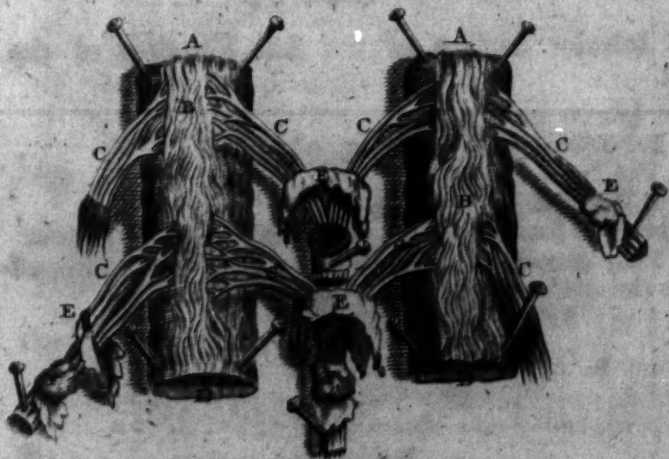


Fig. 3.

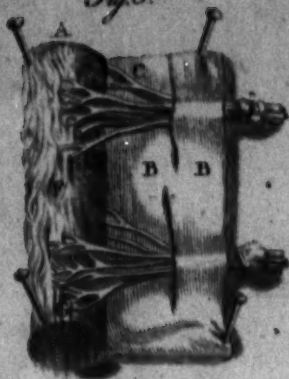
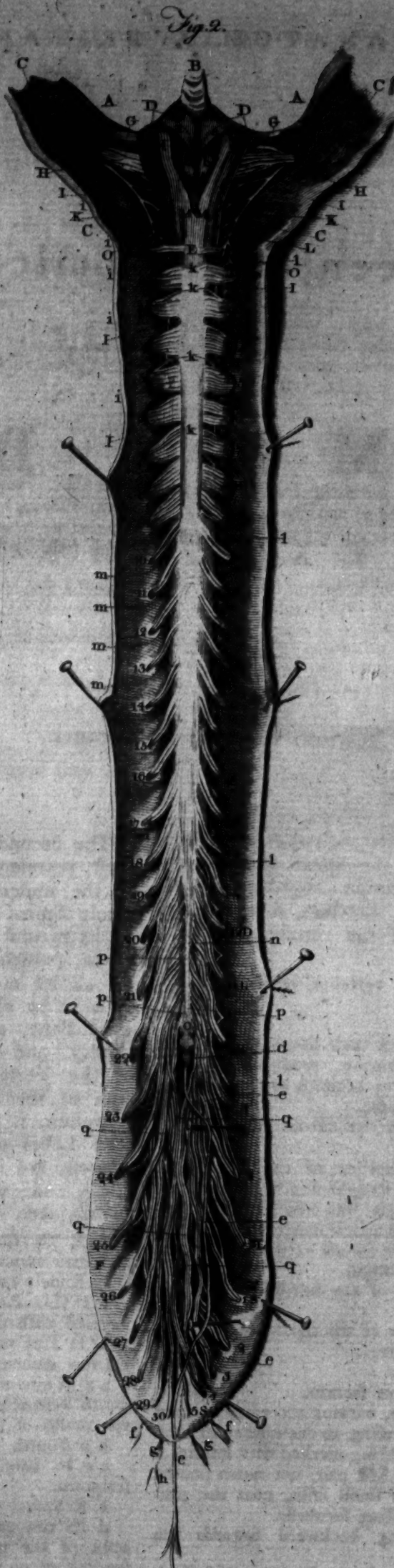
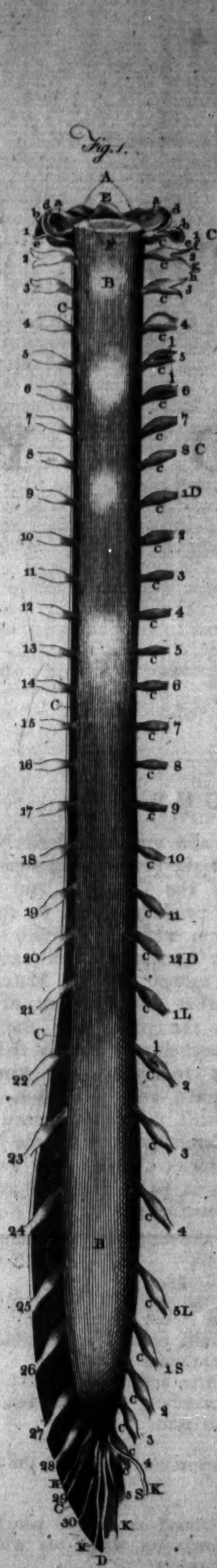


Fig. 3.





T H E

Fifteenth Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

Views of the Spinal Marrow and its Membranes.

FIGURE I.

Represents the Spinal Marrow, or rather production of the Dura Mater, investing the Spinal Marrow and its nerves, as in its natural situation; together with the whole Vertebral Nerves, their direction, situation, and natural size in the specus of the vertebræ; viewed posteriorly.

A Anterior portion of the first vertebra, raised a little obliquely.

a a Its articular surfaces.

b b Its transverse processes, with their foramina.

B B Covering of the spinal marrow, produced from the dura mater, continued from the os occipitis to the middle of the os sacrum, nearly resembling a sac.

C C Cavity or interstice within the osseous sheath of the dura mater.

D Ligament going from the bottom of the sac of the dura mater, and descending in a straight direction among the undermost nerves to the os coccygis, into which it is inserted. The ancients considered this as the *nervus impar*.

E The processus dentatus of the second vertebra.

F Spinal marrow dissected at its origin.

I to 30. All the spinal nerves of the left-side, with their ganglia.

I C to 8 C Eight cervical nerves of the right-side.

I D to 12 D Twelve dorsal nerves.

I L to 5 L Five lumbar nerves.

I S to 5 S Five nerves of the os sacrum.

c c, &c. Thirty pairs of ganglia, varying according to their various situation, exactly corresponding to each other on each side; those on the right-side only being marked with letters.

d Branch of the nerve of the first pair, not much smaller than the anterior, winding in its small sinus, near the articular sinus or surface, and proceeding forwards.

e Another branch of it going backward towards the neck.

f Large branch of the nerve of the second pair, which goes backward, and a small one g, going forward.

h Large branch of the ganglion of the third pair, which proceeds forward to the neck.

i A smaller going to the spine.

k k Four filaments or ligaments going from the lower apex of the dura mater, two on each side, and inserted into the adjacent bones.

l l l Foramina in the ganglia themselves, or between them, for the passage of the vessels within the osseous sheath, frequently observed in these places.

FIGURE II.

The Second Figure also viewed posteriorly, like the First, represents part of the Medulla Oblongata, situated in the under Base of the Cranium, and shows the whole Spinal Marrow produced from it, in situ, and in its natural connection within the sheath of the vertebræ, (which however cannot be seen), and stripped of all its coverings, except the Pia Mater. Where it is to be observed, that the hind-part of the Occipital Bone, as far as the passage of the Vertebral Artery, and its associate nerve, as also the hind-part of the Vertebræ, are removed;—the Anterior Portion of the Os Occipitis, and a Portion of the Os Petrosum, is seen, a little raised and turned backward. The Lobes of the Cerebellum, with the Vermiform Process, are inclined forwards, that the Fourth Ventricle, and parts adjacent to it, may be more conveniently seen and pointed out.

A A The space which the reclined lobes of the cerebellum, and their vermiform process,

B Rudely expressed, occupy.

C C C Portions of the os petrosum and os occipitis, covered with dura mater.

D D Part of the medulla oblongata from which the spinal marrow descends in a continued series.

a a White medullary stræ arising from the furrow of the fourth ventricle, and proceeding, on both sides, to the nervus mollis of the seventh pair.

b b Fourth ventricle.

c c Its longitudinal furrow continued with the Rima calami scriptorii.

E E Spinal marrow.

d Its two eminences, almost circular, in which the lower apex of the medulla terminates, which are wholly smooth, sending off no nervous filaments.

e e A ligament produced from the lower apex of the pia mater, with blood-vessels, which are not here expressed, proceeding over the middle of the cauda equina, and perforating the lower apex of the dura mater, and thus resembling the nervus impar, and at last dispersed over the os coccygis, where it terminates. It is raised by pins, that it may be more distinctly seen.

f f Ganglion of the twenty-ninth pair of nerves.

g g Ganglion of the thirtieth pair, from which, on the left-side, besides the nerve of the same number, another small

small nerve goes off, marked h, which forms a peculiar gangli-form excrescence.

FF Sheath of the spinal marrow produced from the dura mater, here dissected through the middle, turned to each side, and extended by the help of the pins.

GG Nerve of the seventh pair.

HH Nerve of the eighth pair, having a double foramen in the dura mater on the right-side; on the left, one.

II The accessory nerve from its first origin between the posterior filaments of the sixth and seventh nerve, expressed more distinctly on the left-side than on the right, as far as its exit through the dura mater.—On the left-side it passes under a peculiar foramen of the dura mater, on the right it takes a common course with the inferior filaments of the nerve of the eighth pair.

Opposite to ii are its small roots.

kk Nervous communicating filaments, passing obliquely from the lower part of the filaments of one nerve, to the upper part of the filaments of another.

KK Nerve of the ninth or last pair of the brain, consisting on both sides of four filaments, which unite on the right-side, and pass under the common foramen of the dura mater; but on the left they pass through two distinct and separate foramina.

L Origin of the denticulated ligament, or its first adhesion to the dura mater, after which all its teeth, l—l, are seen successively inserted at the interstices of the nerves of the dura mater, represented only on one side.

MM Corpora pyramidalia postica, } not well expressed.

NN ——— olivaria postica,

OO Vertebral arteries passing out of their foramina with nerve i P, (i C.)

mm Nervous filaments coming from the anterior surface of the medulla, and entering along with the posterior ones, the

foramina of the dura mater, to be seen here and there, expressed only in part.

n Place where the nervous filaments begin to unite, and the base of the cauda equina is formed. There the remaining portion of the medulla is no longer seen in situ.

o Place where nervous filaments cease to arise.

pp Origin, from the spinal marrow, of the filaments which form the cauda equina. These filaments are turned back a little on both sides, to shew the nature and form of the medulla concealed in the middle.

qqq Cauda equina.

r to 30. Posterior origins of the thirty vertebral nerves, and their exit from the dura mater.

i C to 8 C Nervous filaments of the eight cervical nerves.

i D to 12 D, and i L to 5 L, also i S to 5 S, as in the former figure.

FIGURE III.

Figure Third presents a Portion of the Spinal Marrow, taken from the upper part of the Back, and viewed from the anterior surface, corresponding to the Bodies of the Vertebrae.

A Ligament produced from the pia mater, and inserted into the medullary substance.

B B Eminences somewhat resembling a silk-worm.

C C Anterior origins of the spinal nerve, where several small twigs form two filaments for each nerve.

D The medulla cut transversely, where the medullary or white portion E is seen within the circumference, and the figure and size of the cineritious substance is shown in the centre F.

THE



Fig. 2.

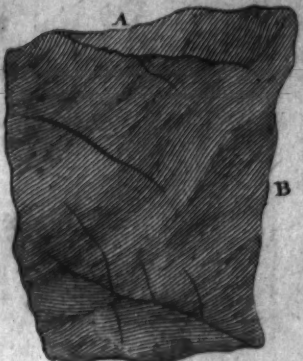


Fig. 3.

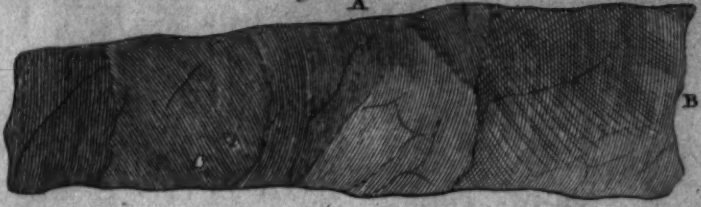


Fig. 4.



Fig. 1.

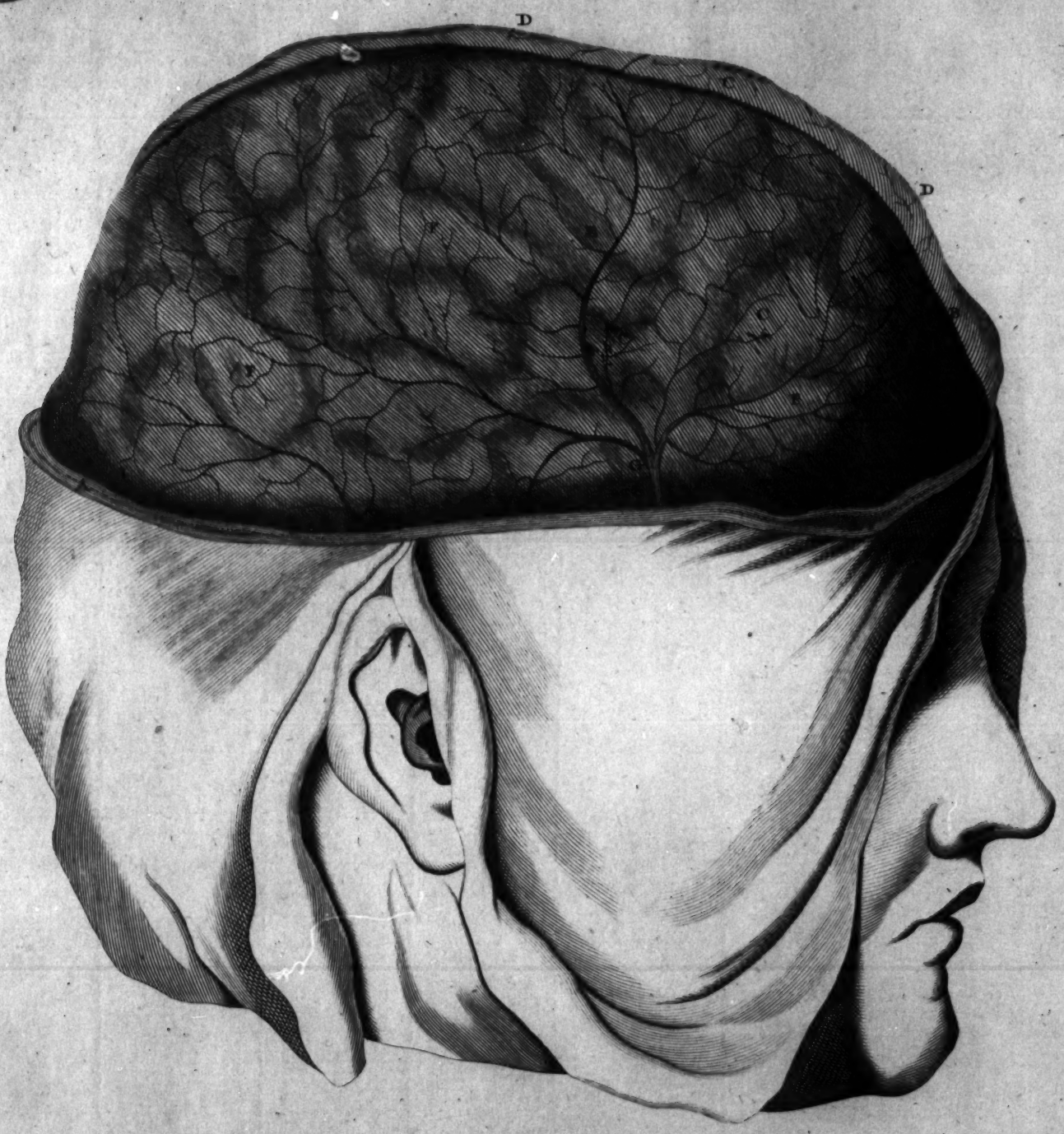


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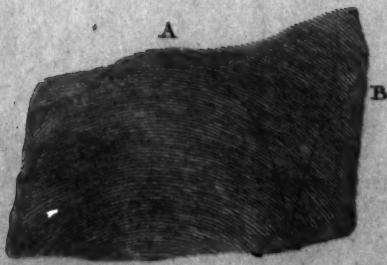


Fig. 6.

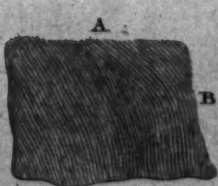
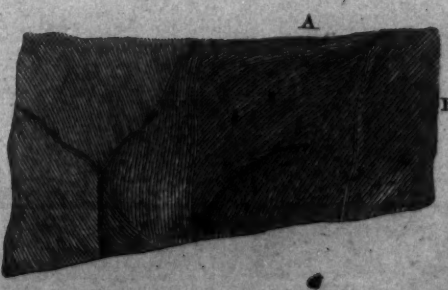


Fig. 7.



A. Bell Pin. M. D. Suptor. fecit.

T H E

Sixteenth Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

FIGURE I.

REPRESENTS the Dura Mater, the upper-part of the Skull being removed.

- A A The cut edge of the cranium.
 B B The course of the superior longitudinal sinus.
 C C C Little pits and scattered fibres of the dura mater, which are commonly occupied by the glands of Pacchioni.
 D D Part of the dura mater which covers the left hemisphere of the brain.
 E E Depressions between the convolutions of the brain appearing through the dura mater.
 F F The convolutions of the brain appearing through the dura mater.
 G The principal artery of the dura mater dividing into branches which have corresponding furrows in the skull.
 H I Branches from the trunk, G.

FIGURE II.

A portion of the Dura Mater taken from above the Posterior Lobe of the Brain, near the Superior Longitudinal Sinus.

- A The superior part.
 B The anterior. The direction of the fibres here is oblique. At the upper and under part branches of the artery are seen.

FIGURE III.

A portion of the Dura Mater at the side of the Superior Longitudinal Sinus.

- A The superior,
 B The anterior part. Many vascular divisions and various planes of fibres of a white and ligamentous or tendinous nature, cross obliquely at different angles.

FIGURE IV.

A portion of the Dura Mater over one of the Anterior Lobes of the Brain.

- A The superior,
 B The anterior part. In this we find many fissures and scattered fibres, especially at the fore-part. There are also several planes of oblique fibres. The dura mater is thinner here than in the parts already delineated.

FIGURE V.

A portion of the Dura Mater from the under and middle part of one of the Hemispheres.

- A The superior,
 B The anterior part. The fibres run chiefly in curved lines. In these different sections, the direction of the fibres of the external layer is found to differ from that of the internal.

FIGURE VI.

Shews the Direction of the Fibres of a portion of the Dura Mater, cut from a similar part with that of the former Figure, but from a different subject.

- A The superior,
 B The anterior part.

FIGURE VII.

Shews the Direction of the Fibres of the Dura Mater, in a portion cut from the upper part of one of the Hemispheres of a subject different from either of the former.

T H E

Seventeenth Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

THE First and Second Figures represent the Vessels of the Pericranium and Dura Mater of a Fœtus of Eight Months from Conception. The Parts were injected and prepared by Ruysch.

FIGURE I.

The outer side of the Cranium covered by the Pericranium.

- A A The arteries of the pericranium injected.
- B B The bregma formed of a ligamento-cartilaginous substance.
- e e A kind of posterior bregma, generally much less evident than the former.
- D A small portion of the occipital bone.
- E E The two parietal bones.
- F F The frontal bone separated by a continuation of the sagittal suture.
- G G The coronal; and H, The sagittal suture appearing through the pericranium.

FIGURE II.

The Skull-cap removed to shew the Dura Mater and Vessels.

- A A The cut edge of the cranium.
- B B Branches of the arteries of the dura mater, the greater part of which grow from one principal trunk on each side.
- C C Arteries larger than the rest: They run almost parallel, and supply the bregma.
- D D The edges of the dura mater which correspond with the bregma.
- E E The superior longitudinal sinus.
- F F Marks made on the dura mater by the coronal suture.

FIGURE III.

The Circumvolutions of the Brain appearing through the Pia Mater, after the Skull-cap and Dura Mater have been raised.

- A A The skin and muscle which covered the cranium turned down.
- B B The cut edge of the cranium.
- C C The left hemisphere of the cerebrum.
- D D The right hemisphere. Between the two hemispheres is the space which was occupied by the falx of the dura mater.
- E E The anterior circumvolutions of the cerebrum which were lodged in the cavity of the frontal bone. They are smaller than those which correspond with the parietal bone; nor do they resemble those on the opposite side of the head.
- F F The middle circumvolutions of the cerebrum: They are situated obliquely; and are larger, longer and straighter, than those in the other parts of the cerebrum.
- G G The posterior circumvolutions of the cerebrum, which are nearly of the same size with the former, but more convoluted and numerous.
- H H The posterior and inferior circumvolutions of the cerebrum, smaller than the preceding, and their disposition similar to that of the anterior circumvolutions.
- I The appearance of an union of two circumvolutions into one: Examples of this kind are frequently met with upon the surface of the brain. Over the surface of the pia mater are seen small arteries, which, after being spread out on that membrane, plunge into the substance of the brain.

The above Figure is taken from the Brain of a Man of 37 years of age.

T H E

Fig. 2.

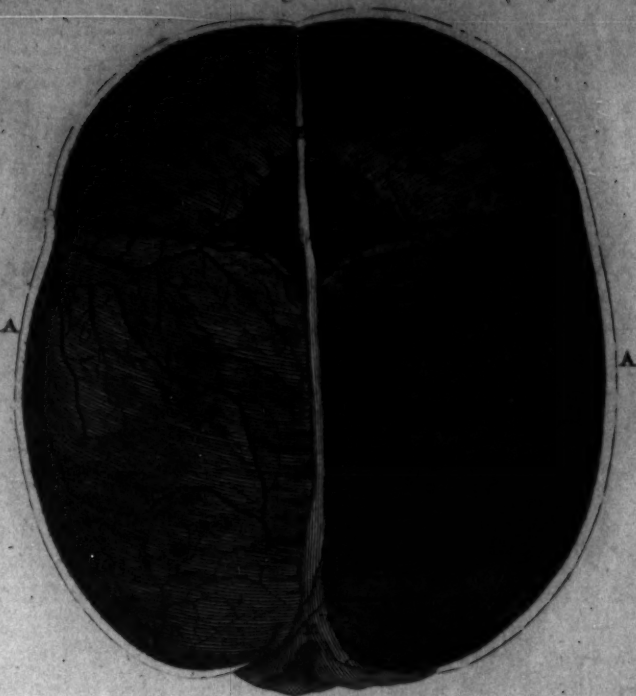
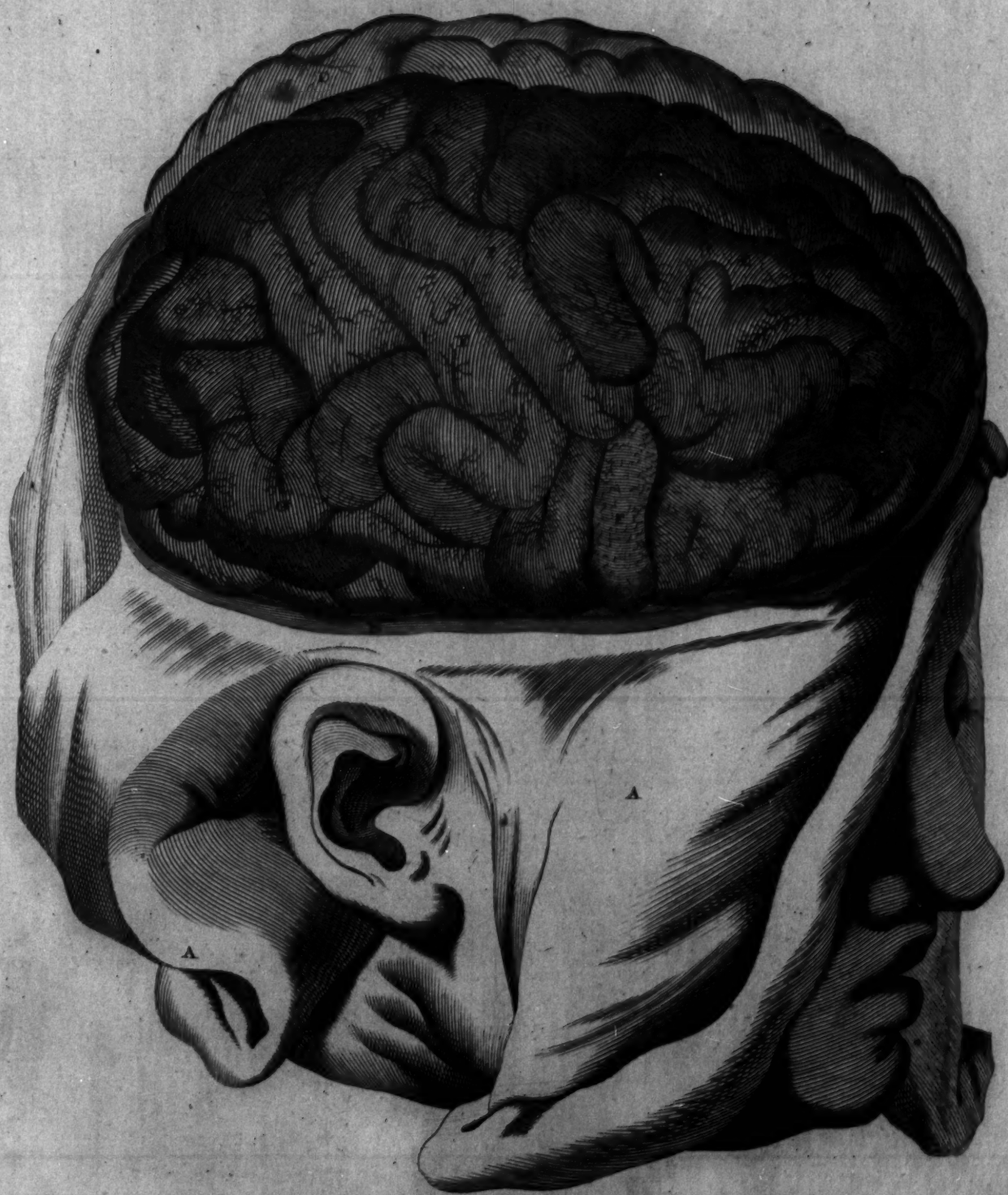
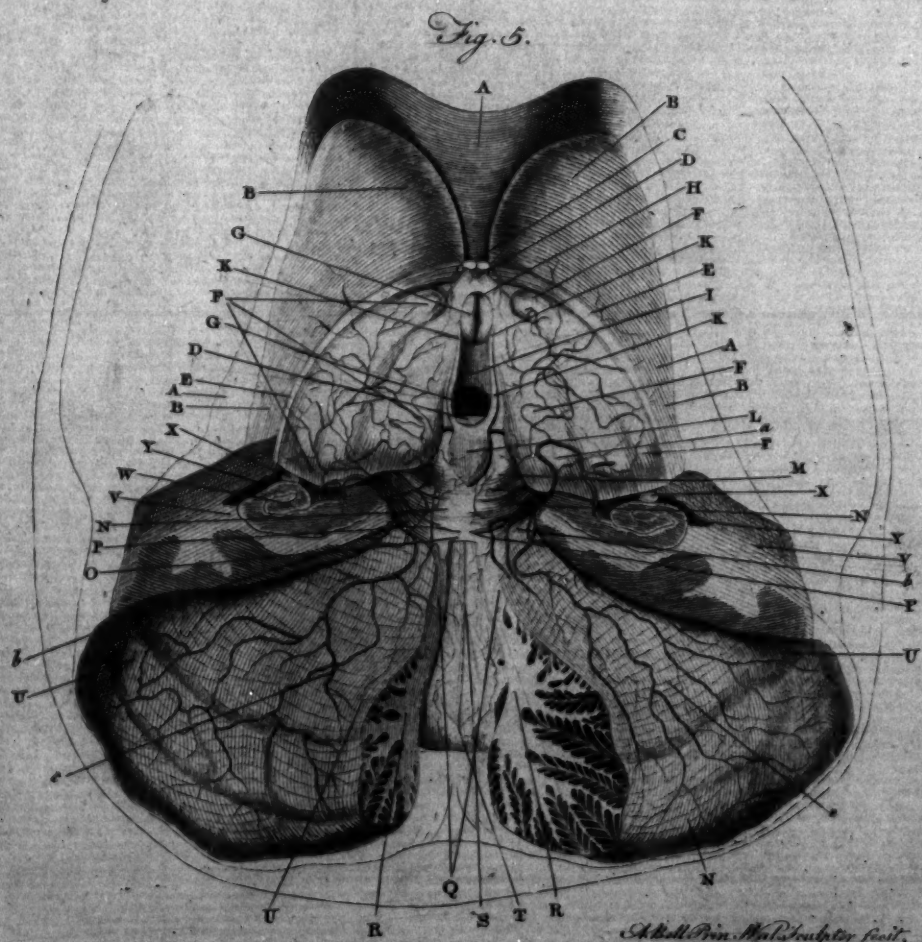
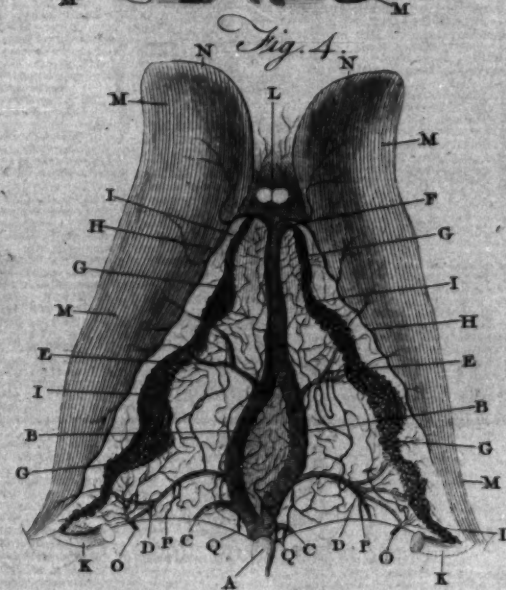


Fig. 1.



Fig. 3.





T H E

Eighteenth Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

FIGURE I.

A VIEW of a Transverse Section of the Brain upon a level with the Corpus Callosum.

- A A The cranium sawed at its greatest diameter.
 B B The dura mater turned back.
 C C, &c. The cortical part of the brain.
 D D The fissures between the circumvolutions.
 E E The arteriæ callosæ, which were placed upon the corpus callosum, and which are now drawn forwards.
 F F Some portions of the cortical substance separated from the rest: They belonged to that portion of the brain which was raised from this.
 G G The medullary substance, in which are seen the cut orifices of many blood-vessels.
 H The branch of an artery which sinks into the fossa of Sylvius.
 I K L The corpus callosum.
 L A raphe or suture in the middle of the corpus callosum; on each side of which is a medullary cord, broad behind, narrow before, which accompanies it through its whole length.
 K K Transverse lines which run under the medullary cords, are connected to them, and pass from one hemisphere to the other, so as to assist in forming the raphe.

FIGURE II.

A Deeper Section of the middle of the Brain. The Outer Parts, being nearly the same with the former, are not here represented. The Corpus Callosum is removed to shew the Lateral Ventricles, to which the following Parts belong.

- A A The corpora striata, on which are seen vessels which form the vena Galeni, which opens into the torcular Herophili. The outer edge of the corpora striata was covered by the edge of the corpus callosum, and that joined to the medullary part of the brain.
 B B The anterior extremities or cornua of the lateral ventricles.
 C The septum lucidum, improperly so called, being almost entirely opaque. This is connected above to the corpus callosum, below to the fornix, and separates the lateral ventricles from each other.
 D D The two laminae of the septum lucidum; each of which is composed of two thin membranes, the internal medullary, the external cineritious.
 E A space or fissure, somewhat of a triangular form, placed between the laminae of the septum lucidum, and called Fossa Sylvii. It is a natural cavity always present, varying in

different subjects, but never communicating with the third ventricle.

F F The two posterior crura of the fornix; the anterior crura are hid by the septum lucidum.

G The back-part of the corpus callosum joined to the fornix and septum lucidum.

H H The continuation of the crura fornicis.

I I The anterior bandelette of the cornua ammonis, the origin only of which is here seen. It is known by the name of *corpus fimbriatum*, or more properly by that of *tania bipocampi*.

K K The vascular or choroid plexus. It is situated over the outer edge of the fornix and upper part of the thalami nervorum optico-
 rum.

L L The centrum semicirculare geminum of *Vieussens*. Limbus posterior corporis striati *Willefii*. Tania semicircularis *Halleri*. Bandelette demi-circulaire of Vicq. d'Azyr. Two medullary bands placed between the corpora striata and thalami nervorum optico-
 rum.

M M The posterior prolongations of the lateral ventricles.

N N Projectures in form of a cock-spur.

O O The edge of the cortical substance forming various circumvolutions.

P The external margin of the ancyroid cavity.

Q The extremity, prolongation, or *cornu posterius*, of the posterior cavity of the lateral ventricles.

FIGURE III.

This Figure differs from the former in having the Septum Lucidum removed from the Fornix, and the Choroid Plexus raised from the Optic Thalami. Here also, the proportion of the Lateral Ventricles is somewhat different.

A The place which the anterior extremity of the septum lucidum occupied.

B B The anterior broad extremity of the corpora striata.

C C The outer edge of the corpora striata.

D D The posterior narrow extremities.

E E The anterior veins of the corpora striata.

F F The posterior veins.

G G The trunks of these veins; they pass into the Vena Galeni under the fornix.

a a A passage by which the lateral ventricles communicate with each other and with the third one.

H H The centrum semicirculare geminum.

I I The upper surface of the thalami optici, joined together before, and separated behind.

K The fornix, in the middle of which is the vestige of the septum lucidum.

L L The outer sharp edge of the fornix. Small blood-vessels

vessels are observed here which terminate in the choroid plexus.

M M The convex posterior part of the fornix.

N N The outer ends divided into two bands: The anterior edge is called Corpora Fimbriata, the posterior is connected with the cornua ammonis.

O O The origin of the cornua ammonis.

P P Blood-vessels which lie in the posterior prolongations of the lateral ventricles, and pass to the veins of Galen.

Q Q The continuation of the lateral ventricles, called Digital, or Ancyroid.

R R A projection joined to the cornua ammonis, and named by *Morand*, *Ergot*, or *Cockspur*; or, it may be called Hippocampus Minor.

S The division between the posterior lobes.

T The dura mater turned back.

U The cut edge of the skull.

FIGURE IV.

Represents the different Branches which terminate in the Veins of Galen.

A The common trunk of the veins of Galen. It is very short and terminates in the torcular herophili. A little farther forwards is seen the termination of the two veins of Galen into the common trunk.

B B The right and left veins of Galen: The space between them is covered by numerous branches, which are chiefly arteries.

C C The posterior branches of the veins of Galen, the distribution of which belongs to the parts in the neighbourhood of the nates, testes, and to the back-part of the lateral ventricles.

D D Middle branches of the venæ Galeni. They are dispersed about the origin of the pedes hippocampi, &c.

E E Anterior branches of the venæ Galeni which belong to the anterior part of the thalami optici; the corpora striata and choroid plexus.

F The anterior extremity of the venæ Galeni, each of which divides into two principal branches.

One G, The author of this figure calls the Choroid Vein.

The other H, he names, Great Vein of the Corpus Striatum.

I The choroid plexus, very narrow anteriorly, expanding in the middle, and contracting behind, where it sinks, by the side of the cornua ammonis.

K K The posterior crura of the fornix.

L The anterior crura fornix.

M M The outer edge of the corpora striata.

N N The anterior extremity of the corpora striata, which corresponds with the anterior extremity of the lateral ventricles.

O O Branches of the posterior cerebral arteries.

P P Other branches passing with the former to the choroid plexus, after having formed, in some parts, curious plexus.

Q Q Small branches of the superior arteries of the cerebellum.

FIGURE V.

Part of the Brain cut horizontally, to show the Corpora Striata, the Thalami Optici, the Pineal Gland,

the Nates, Testes, &c. The Cerebellum is cut perpendicularly from before backward, and the Lateral Parts separated a little from each other.

The Figure is Haller's, improved by the Vicq. d'Azyr.

A The middle of the brain which surrounds the corpora striata.

B B The corpora striata, with some blood-vessels upon their surface.

C A section of the anterior pillars of the fornix.

D The commissura anterior and posterior of the brain.

E E The tæniæ semicircularis, or centrum semicirculare geminum.

F F, &c. The thalami optici covered with many vessels. At the fore-part, the letters F F point out also the anterior tubercles of the thalami.

G G The bottom of the third ventricle.

H The origin of the infundibulum.

I The commissura mollis of the optic thalami, concealing part of the third ventricle.

K K The peduncles of the pineal gland. Behind they cover part of the posterior commissure of the brain, but are distinct from it.

L The pineal gland. It is chiefly composed of cineritious substance.

M M The tubercula quadrigemina superior, or nates, over which the pineal gland is placed.

N N The tubercula quadrigemina inferior, or testes.

O A medullary lamina between the testes and valvula Vieussenii; which last ends here.

P P The origin of the fourth pair of nerves.

Q Q Two medullary tracts called Proceffus ad Testes, Columnæ valvulæ Vieussenii, &c.

R R The medullary part of the cerebellum, called Arbor Vitæ.

S The cavity of the fourth ventricle, in the bottom of which runs a furrow, called Calamus Scriptorius.

T The end of the fourth ventricle and calamus scriptorius. It is situated over the back-part of the medulla oblongata.

U U The cerebellum.

V V A perpendicular cut of the brain.

W W The cornua ammonis, or great hippocampi.

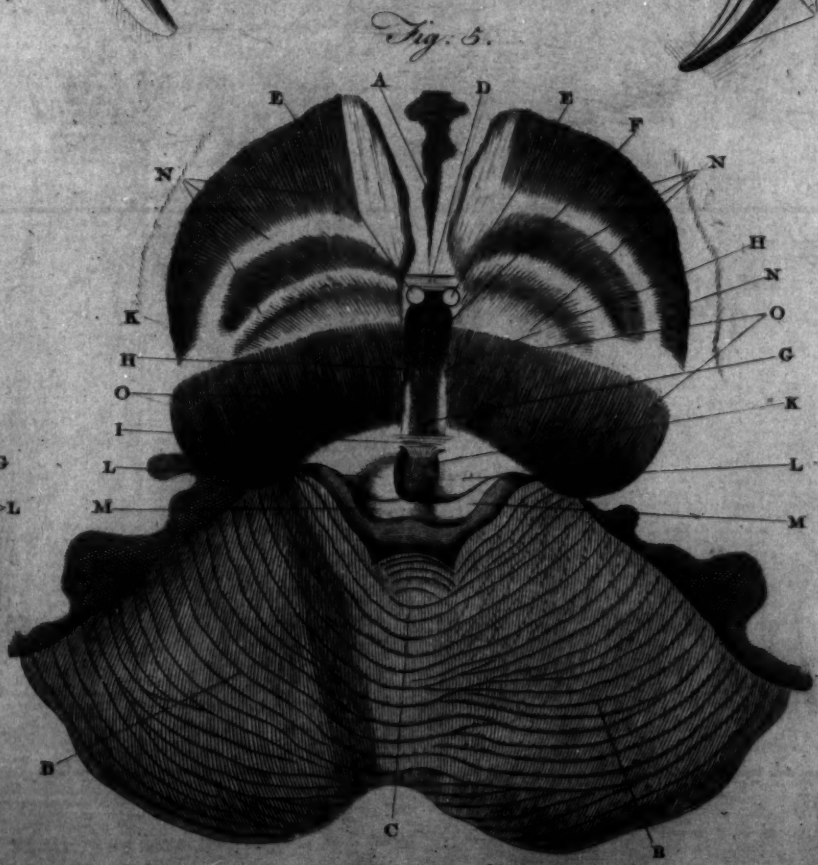
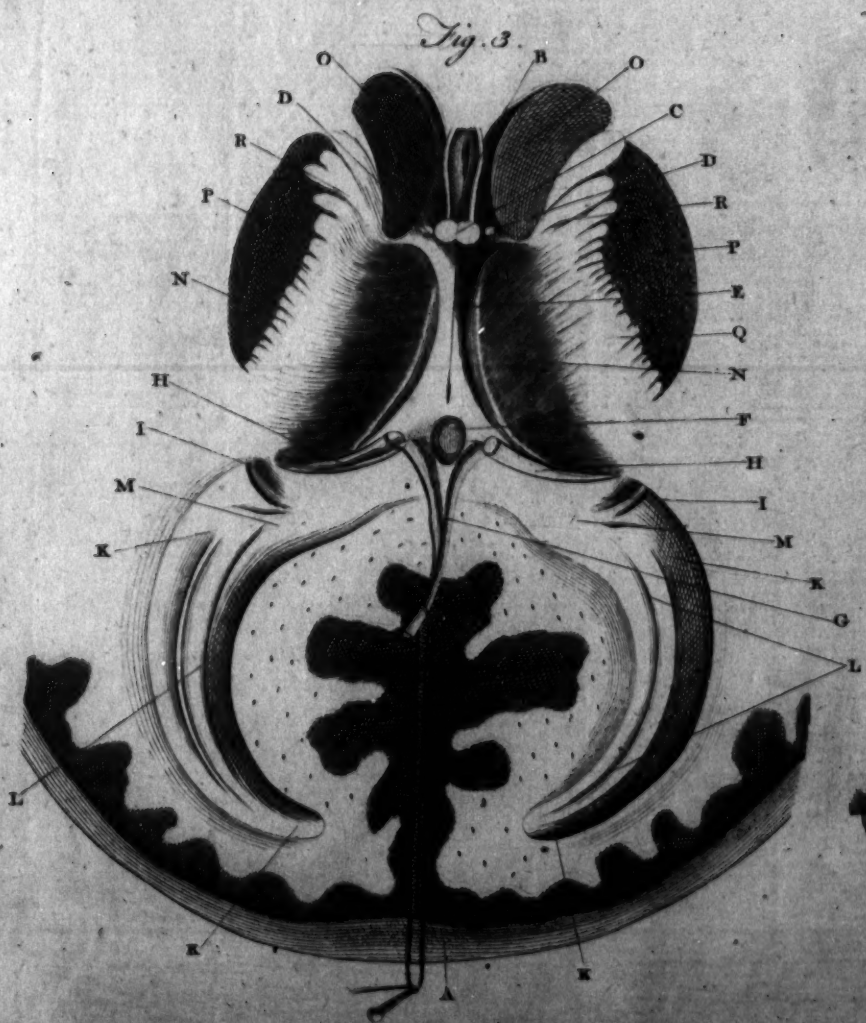
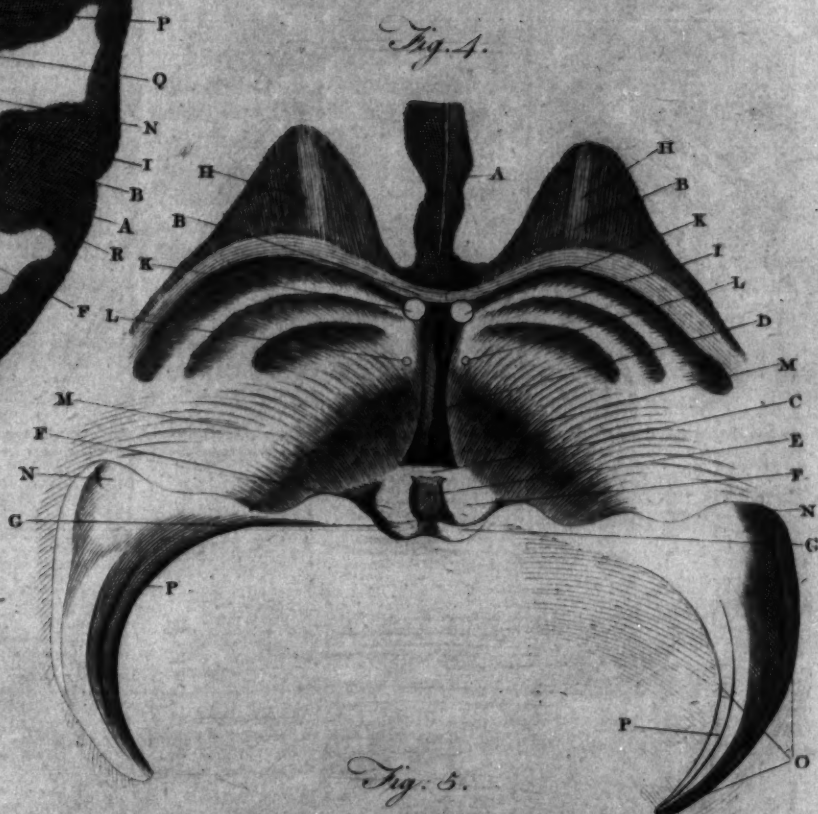
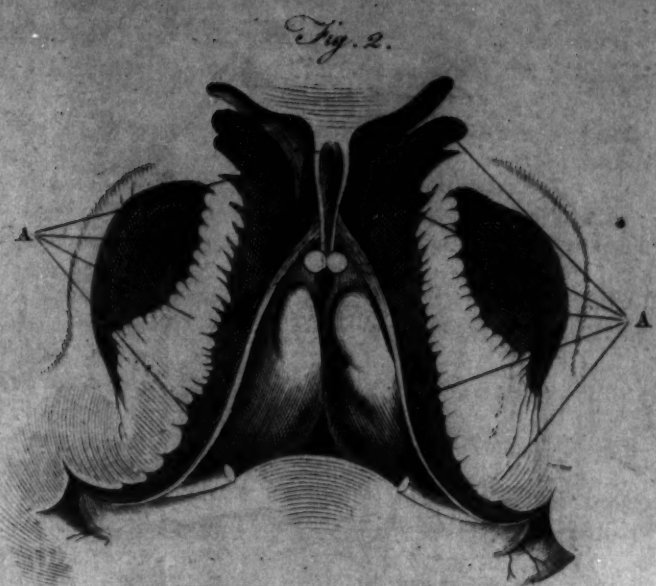
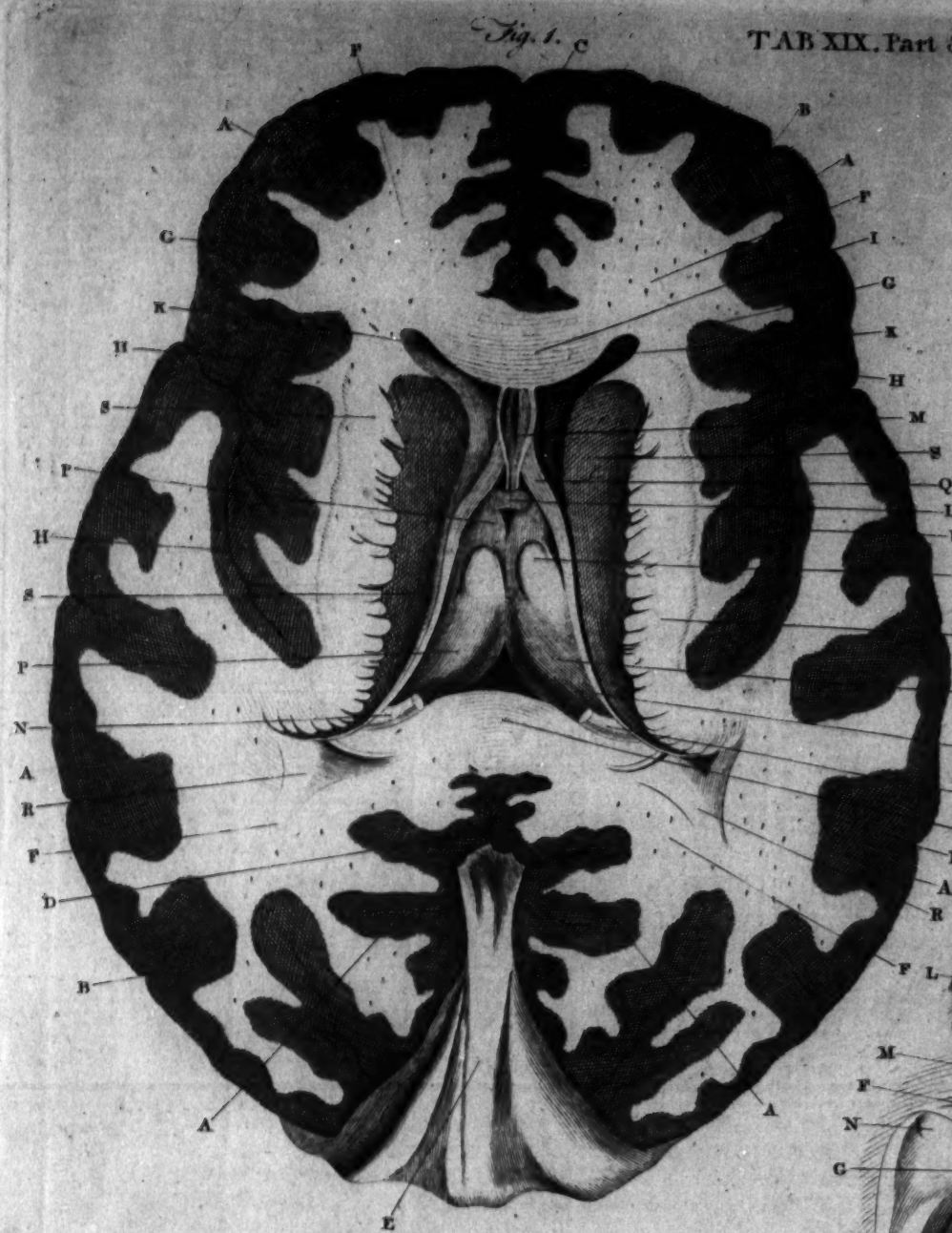
X X The corpus fimbriatum, or band of the great hippocampus.

Y Y The choroid plexus.

a A principal branch of the deep cerebral artery, which comes from the vertebral one. This sends small branches inwards to the tubercula quadrigemina, pineal gland, and its peduncles. The principal branches run forwards to the thalami optici and choroid plexus; these frequently anastomose and cross each other. A few branches run from the former to the tænia semicircularis, and back-part of the corpora striata.

b b The superior arteries of the cerebellum. The first part of these sends branches to the tubercula quadrigemina, and parts near them; and some small twigs run to the fourth ventricle, where they communicate with the superior arteries of the cerebellum. On the left-side of the tubercula, the deep and superficial branches of the superior arteries of the cerebellum communicate freely.

c c The continuation of the superficial arteries of the cerebellum. They spread over its surface, sink into its substance, and there communicate with the arteries which come from its under part.



T H E

Nineteenth Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

FIGURE I.

A N Horizontal Section of the Brain, a little deeper than the Corpus Callosum.

- A A, &c. The cortical part.
- B B The fissures which separate the convolutions.
- C The separation of the anterior lobes.
- D The separation of the posterior lobes; or rather, the posterior separation of the hemisphere of the brain.
- E The dura mater turned back.
- F F The medullary substance of the brain, in which numerous orifices of cut blood-vessels appear. Between the cortical and medullary substance, sometimes a thin lamina appears, but of a different colour from either, approaching sometimes to a white, at other times to a yellow, and sometimes to a horny colour: But this, having been met with in a few subjects only, cannot be given as the general structure G G.
- H H The fossa sylvii, a division between the anterior and lateral lobes of the brain.
- I I Medullary threads; they are the remains of the anterior and posterior parts of the corpus callosum.
- K K The anterior extremities or cornua of the lateral ventricles.
- L A section of the two anterior pillars of the fornix.
- M The anterior part of the septum lucidum. In the fore-part is seen a fissure between the laminae, under the name of Fossa Sylvii.
- N N A section of the posterior crura of the fornix.
- O P The thalami optici.
- O The anterior tubercles of the optic thalami.
- Q Q The tænia semicircularis.
- R R The anterior part of the digital cavity of the lateral ventricles.
- S S The corpora striata. The upper and outer part is cut horizontally to shew their medullary and striated structure.

FIGURE II.

An horizontal Section immediately under the preceding; but the Corpora Striata are cut obliquely outwards and downwards.

A A The corpora striata, in which are seen the internal and external parts cortical; the middle part medullary, and somewhat striated. The other parts are similar to what are found in the other figure.

PART III.

FIGURE III.

A Section still deeper than the former, including also the Optic Thalami, which are cut a little higher than the Anterior Commissure.

- A The cut edge of the cranium.
- B The septum lucidum, in which appears the fossa sylvii.
- C The anterior crura fornix.
- D D A section of the anterior part of the tænia semicircularis.
- E A fissure forming the bottom of the third ventricle.
- F Glandula pinealis turned back. At the posterior extremity of the third ventricle, is the beginning of a passage which runs under the tubercula quadrigemina, by the name of Iter ad Quartum Ventriculum.
- G The plexus choroides of the third ventricle, which is placed under the vascular membrane lining the fornix. In this membrane the veins of Galen are situated.
- H A section of the posterior crura of the fornix.
- I The beginning of the cornua ammonis, or great hippocampi.
- K K The digital cavities.
- L L The Ergots, Cockspurs, or small hippocampi.
- M M The union of the great and small hippocampi.
- N N A section of the optic thalami, in which a mixture of cineritious and medullary substance appears: Curved medullary lines run at the inner edge of these bodies.
- O O The anterior round extremities of the corpora striata.
- P P The outer part of the corpora striata, composed of many cineritious and medullary parts.
- Q A striated appearance common to the thalami optici and corpora striata.
- R R The same continued into the corpora striata. From the above it appears, that the optic thalami are separated from the corpora striata, by a range of medullary laminae.

FIGURE IV.

An horizontal Section of the brain upon a level with the two Commissures, to shew the Parts about the Third Ventricle.

- A A fissure between the anterior lobes.
- B The commissura anterior running through the substance of the corpora striata.

G

C The

C The commissura posterior.
 D The third ventricle appearing like a furrow.
 E The pineal gland.
 F F The tubercula quadrigemina superior, or nates.
 G G The tubercula quadrigemina inferior, or testes.
 H H Medullary striæ observed in many subjects passing from the anterior convex part of the anterior commissure to the medullary part of the anterior lobes.
 I I Portions of the corpora striata placed behind the anterior commissures, and forming cineritious and medullary arches.
 K K A section of the anterior crura of the fornix.
 L L Two little medullary cords unobserved by the ancients. They run from the corpora albicantia to the anterior tubercles of the optic thalami, marked O, in Fig. 1.
 M M A section of the optic thalami, in which numerous cineritious and medullary striæ appear in curved lines.
 N N The origin of the great hippocampi.
 O O The digital cavity.
 P P The small hippocampi.

FIGURE V.

The middle of the Brain cut horizontally at the height of the Commissures. The Lateral Parts are cut obliquely outwards and downwards.

A The division of the anterior lobes.
 B B The cerebellum entire.
 C The superior vermiform process of the cerebellum.
 D The commissura anterior, of a fibrous texture.
 E E The anterior crura of the fornix cut and separated to show the third ventricle.
 F The upper end of the infundibulum.
 G The posterior part of the third ventricle.
 H H Its sides.
 I The commissura posterior.
 K The pineal gland, from the bottom of which medullary threads run to be connected with the peduncles seen in Fig. 5. Tab. XVIII.
 L L The nates.
 M M The testes.
 N N The corpora striata, forming medullary and cineritious arches.
 O O The thalami optici appearing cineritious: But in these, as well as in the cineritious arches of the corpora striata, there is throughout a mixture of medullary striæ, which, however, are here not fully represented.

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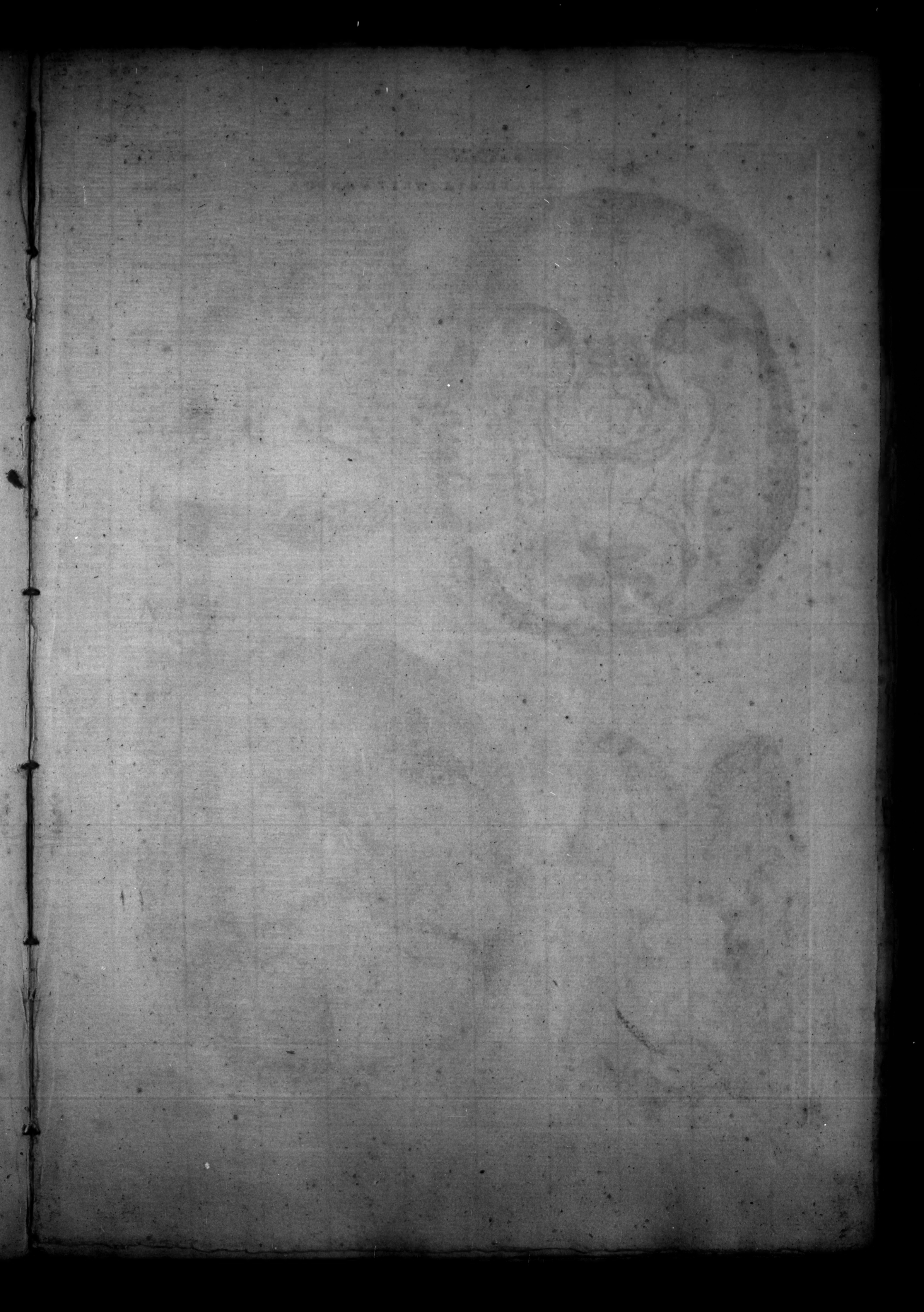


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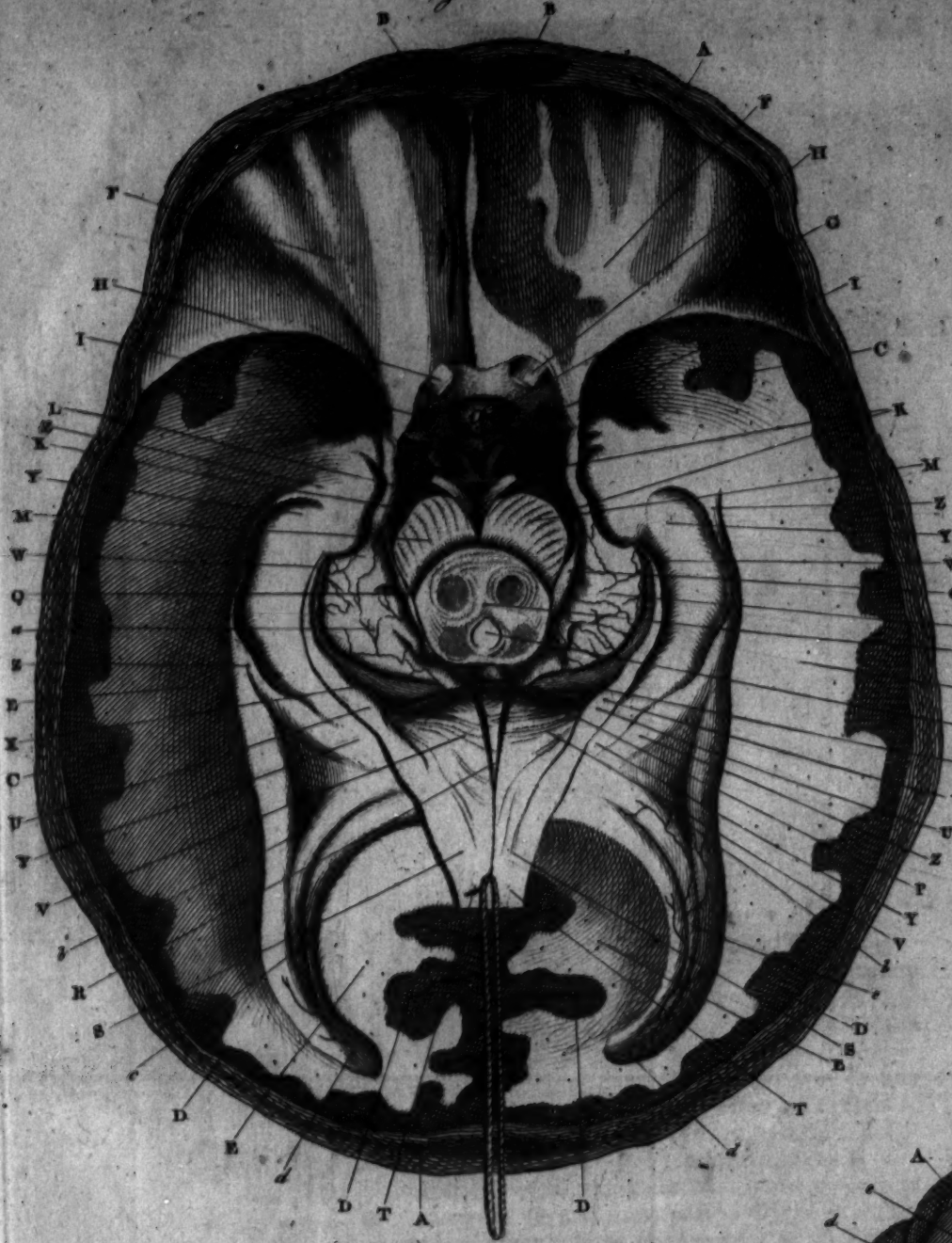


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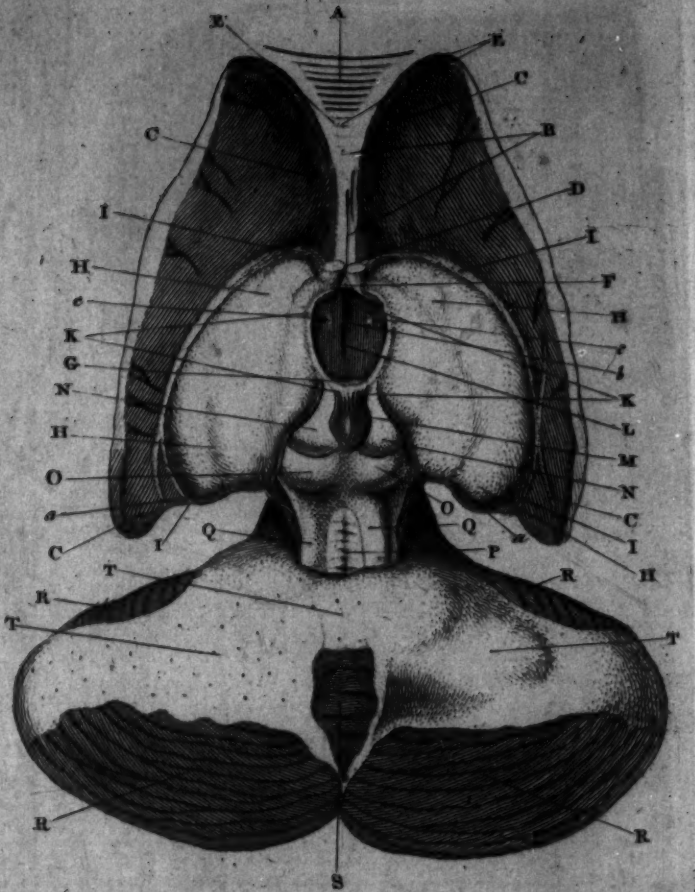


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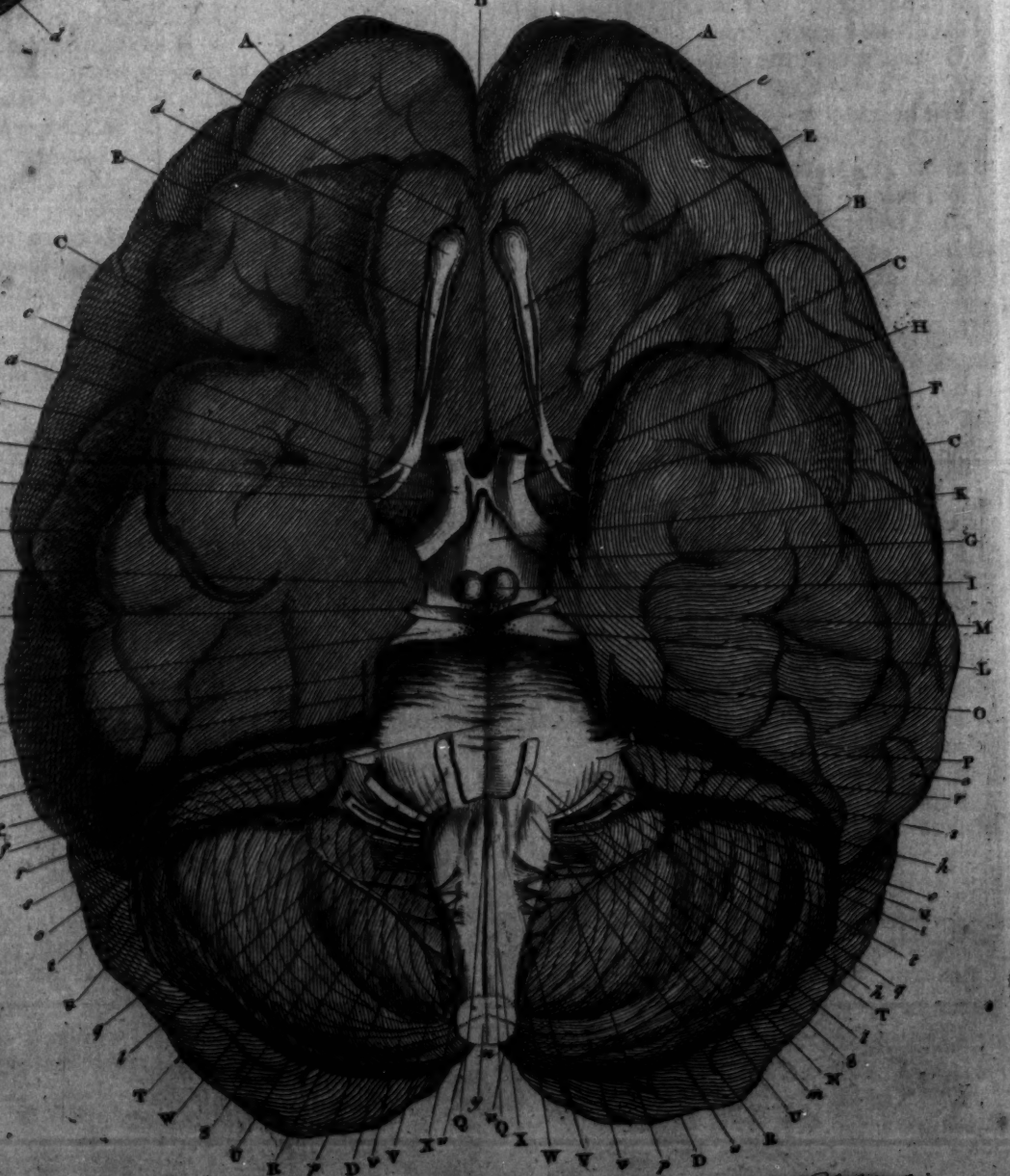
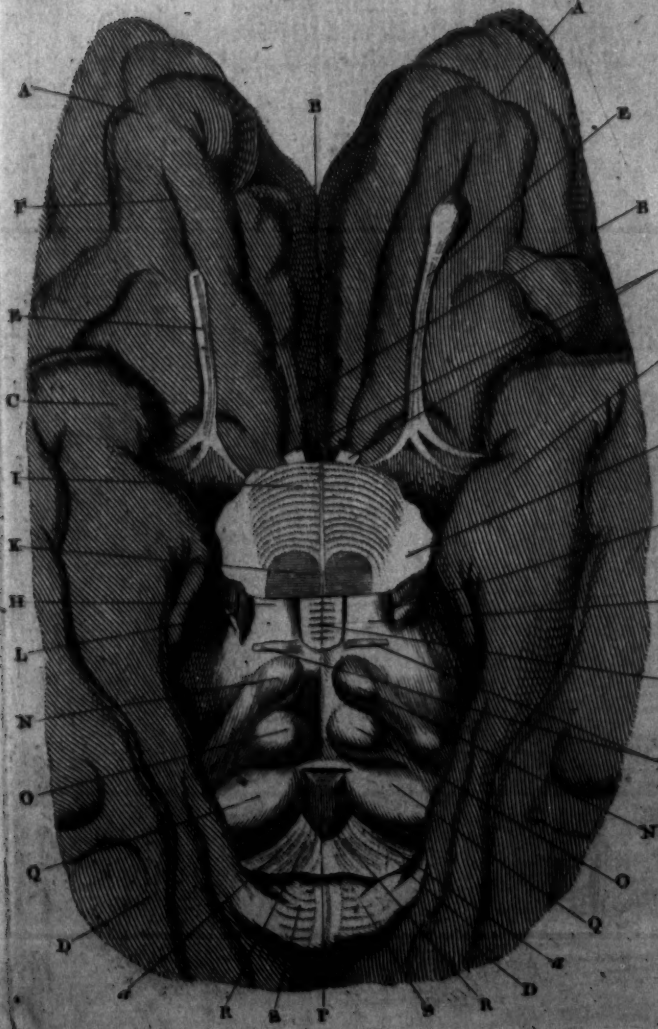


Fig. 3.



Ad. Bull. Pin. H. de la Chapelle fecit.

T H E

Twentieth Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

FIGURE I.

A N horizontal Section of part of the Brain and Cerebellum.

A The remains of the anterior part of the corpus callosum.

B The inferior part of the septum lucidum.

C C The corpora striata.

D A section of the anterior crura of the fornix.

E E The anterior cornua of the lateral ventricles.

F The anterior commissure of the brain.

G The posterior commissure.

H H The thalami optici.

a Their posterior tubercles.

I I The tænia semicircularis, detaching threads behind, which are not constant.

K K The peduncles of the pineal gland at the upper and inner side of the thalami optici.

L The cavity of the third ventricle, the sides of which are separated by force.

b The opening of the infundibulum.

c c The remains of the commissura mollis of the optic thalami which have been lacerated.

M The pineal gland.

N N The nates.

O O The testes.

P The valvula Vieussenii.

Q Q Medullary columns, called by Haller, "Processus ad Testes."

R R The cortical or cineritious part of the cerebellum, where the circumvolutions do not run parallel, but in different places cut each other in sharp angles.

S A portion of the superior vermiform process of the cerebellum.

T T The centrum medullare cerebelli, in which is seen a middle portion uniting the two lateral ones, as in the brain.

FIGURE II.

Part of the Brain remaining in the base of the Cranium, to shew the Fornix, Cornua Ammonis, and parts connected with them.

A A The cut edge of the cranium.

B B The frontal sinuses, with their openings into the nose.

C C The cortical substance of the lateral lobes of the brain.

D D The same of the posterior lobes.

E E The medullary substance, with numerous small dots, which are the orifices of cut arteries.

F F The orbital plates of the frontal bone, upon which the anterior lobes of the brain were placed.

G The glandula pituitaria, in the middle of which is the end of the infundibulum.

H H The optic nerves.

I I The internal carotid arteries.

K The bifurcation of the vertebral or basilar artery. The anterior branches communicate with the internal carotids.

L The origin of the third pair of nerves.

M M N A section continued obliquely downwards and forwards, through the tuber annulare and crura cerebri, in all of which parts a mixture of cineritious and medullary matter is observed.

M M The crura cerebri.

N The tuber annulare, in which there are four cineritious parts, which answer in a great measure to the tubercula quadrigemina.

O A section to the Iter ad quartum ventriculum.

P The pineal gland.

Q Q The inner edge of the tentorium.

R The plexus choroides of the pineal gland and third ventricle, supported by a thread.

S The fornix cut at its fore-part, and turned back.

T The two anterior crura of the fornix.

U U The two posterior crura of the fornix.

V V The lyre,—transverse medullary lines upon the under surface of the fornix.

W W The tænia or bands of the great hippocampi: The outer edge is fixed to the great hippocampi, the inner edge is loose.

X X The plaited or serrated portion of the great hippocampi.

Y Y The cornua ammonis, or great hippocampi.

Z Z Z The inferior prolongations of the lateral ventricles.

a a Deep convolutions of the brain with small blood-vessels running upon them. The author of this figure considers these convolutions as a sort of inferior floor to the great hippocampi.

b c d The digital cavity of the lateral ventricles, in which are placed *c*, The ergot of former authors, and hippocampus minor of Vicq. d'Azyr. The surface of this cavity, as well as that of the cornu ammonis, is covered with medullary substance, which also prevails in the superior prolongations of the lateral ventricles.

FIGURE III.

FIGURE III.

A view of part of the Base of the Brain, after the Dura Mater and Cerebellum have been removed. The Tuber Annulare and Tubercula Quadrigemina are raised and brought forwards, so that their situation is inverted.

- A A The anterior lobes.
- B The inner sides of these lobes contiguous.
- C D Part of the lateral and posterior lobes.
- E E The olfactory nerves, in which are seen three medullary cords forming each of them; their body large at its origin, smaller in the middle, and forming a large bulb anteriorly, composed chiefly of cineritious matter. The right nerve is cut across, to show its triangular form.
- F A depression in which the nerve is placed: In the natural situation, these nerves converge a little anteriorly; here, they diverge, because the anterior lobes are somewhat separated from each other. At the inner side of the olfactory nerves, the convolutions run parallel to them and to the anterior lobes.
- G The valve of Vieussens, or middle medullary lamina of the cerebellum.
- H H The crura cerebri.
- I I A vertical section of the tuber annulare, in which is seen the raphe running longitudinally, and medullary and cineritious lines placed transversely.
- K Two rounded spaces of cineritious substance, forming the bottom of the fourth ventricle.
- L L Two projections at the sides of the crura cerebelli.
- M M The fourth pair, or pathetic nerves, each beginning by two or three diverging roots.
- N N The tubercula quadrigemina inferior, or testes, which are contracted in their middle, and terminate behind by rounded eminences.
- O O The tubercula quadrigemina superior, or nates.
- P The pineal gland, which is here in a pendent state, while naturally it is situated obliquely upon the nates. At the root of the gland are placed some transverse medullary striae which belong to the commissura posterior.
- Q Q The posterior enlargements or tubercles of the optic thalami.
- R R The posterior part of the fornix.
- a a The beginning of the serrated portion of the cornua ammonis. The continuation is seen in Fig. 2. x. This disposition distinguishes the human brain from that of quadrupeds in general, in which this part of the cornu ammonis is of great size. The ape-kind, however, are an exception, for in them it is somewhat similar to that in man.
- S S The posterior part of the corpus callosum, in the middle of which is its raphe.

FIGURE IV.

A view of the Base of the Brain, and of the Nerves, which take their origin from it.

- A A The anterior lobes of the brain.
- B The division of the anterior lobes.
- C C The lateral lobes. Between the lateral and anterior lobe is the fissure of Sylvius.
- D D The posterior lobes. The separation between the posterior and lateral lobes is uncommonly distinct in this figure.
- E E The olfactory or first pair of nerves, which, contrary to other nerves, converge in running along the base of the brain.
- a The external root which comes from the fissure of Sylvius, and is at first hid by the lateral lobe of the brain.
- b The middle root which is longer than the former, and comes also from the fissure of Sylvius.
- c The internal root, not a thread like the two preceding, but a prolongation of the medullary substance. The body of

the nerve is thick at its beginning, and smaller some way farther forwards, with the under surface slightly depressed.

d The anterior extremity, forming a bulb of soft cineritious matter, mixed with some streaks of medullary substance, and in the natural situation, supported upon the cribriform plate of the ethmoid bone.

e Extremity of the fissure in which the nerve is placed.

F F A perforated part of the brain for the passage of many small arteries.

G G Circumvolution answering to the cornu ammonis.

H H The optic or second pair of nerves: Their union is partly concealed by the infundibulum. They are cut across near their entry into the orbits.

I The corpora albicantia, medullary without and cineritious within.

K The infundibulum, formed of medullary substance, continued from the sides of the third ventricle, and covered with the pia mater. It is impervious at its under extremity, where it is inserted into the glandula pituitaria.

L L The crura cerebri formed of fibrous medullary substance. At their inner edge the cut extremities of blood-vessels are seen.

M M The nerves called Oculo Musculares, or third pair.

N N The protuberantia annularis, or pons Varolii.

f An impression made by the arteria basilaris.

g g The transverse medullary tracts which compose the inferior surface of the protuberantia.

O O The pathetic or fourth pair of nerves.

P P The nervi trigemini, or fifth pair arising from the crura cerebelli, where they join the tuber-annulare. Each nerve is composed of two portions or nervous fasciculi, an anterior small one, and a posterior large.

Q Q The corpora pyramidalia.

R R The corpora olivaria.

S S The nervi abductores oculorum, or sixth pair, the origin of which varies a little in different subjects; but, in general, they grow from the beginning of the corpora pyramidalia, and sometimes also from the tuber annulare, near this place. The sixth pair has a small thread at its inner side, separate from the principal trunk.

I I The seventh pair of nerves arising from a fossa between the corpora olivaria, crura cerebelli, and tuber annulare.

h The portio dura of the seventh pair.

i The portio mollis of the seventh pair, or auditory nerve, properly so called.

k *Wrisberg's* Portio media inter communicantem faciei et auditivum nervum. Vicq. d'Azyr finds this portion commonly formed of two, but sometimes of three small intermediate trunks.

U U The eighth pair of nerves, composed of glosso-pharyngeus and par vagum.

l l The nervus glosso-pharyngeus. It is distinct from the par vagum, and passes through a hole in the dura mater proper to itself.

m The par vagum of the eighth pair, composed of several small threads united into fasciculi.

V V The lingual, or ninth pair, formed of three fasciculi of small threads, which at first are distinct from each other.

W W The nervus accessorius of the eighth pair, the beginning of it is cut away with the spinal marrow, X X.

Y A section of the spinal marrow, in which is seen medullary substance externally, and cineritious matter within, under a cruciform appearance.

& & The cerebellum.

n Separation of the lobes of the cerebellum.

o o A furrow of the crura cerebelli, which is continued with the lateral and circular, or great furrow of the cerebellum.

p p Projections which may be called Lobules of the medulla oblongata.

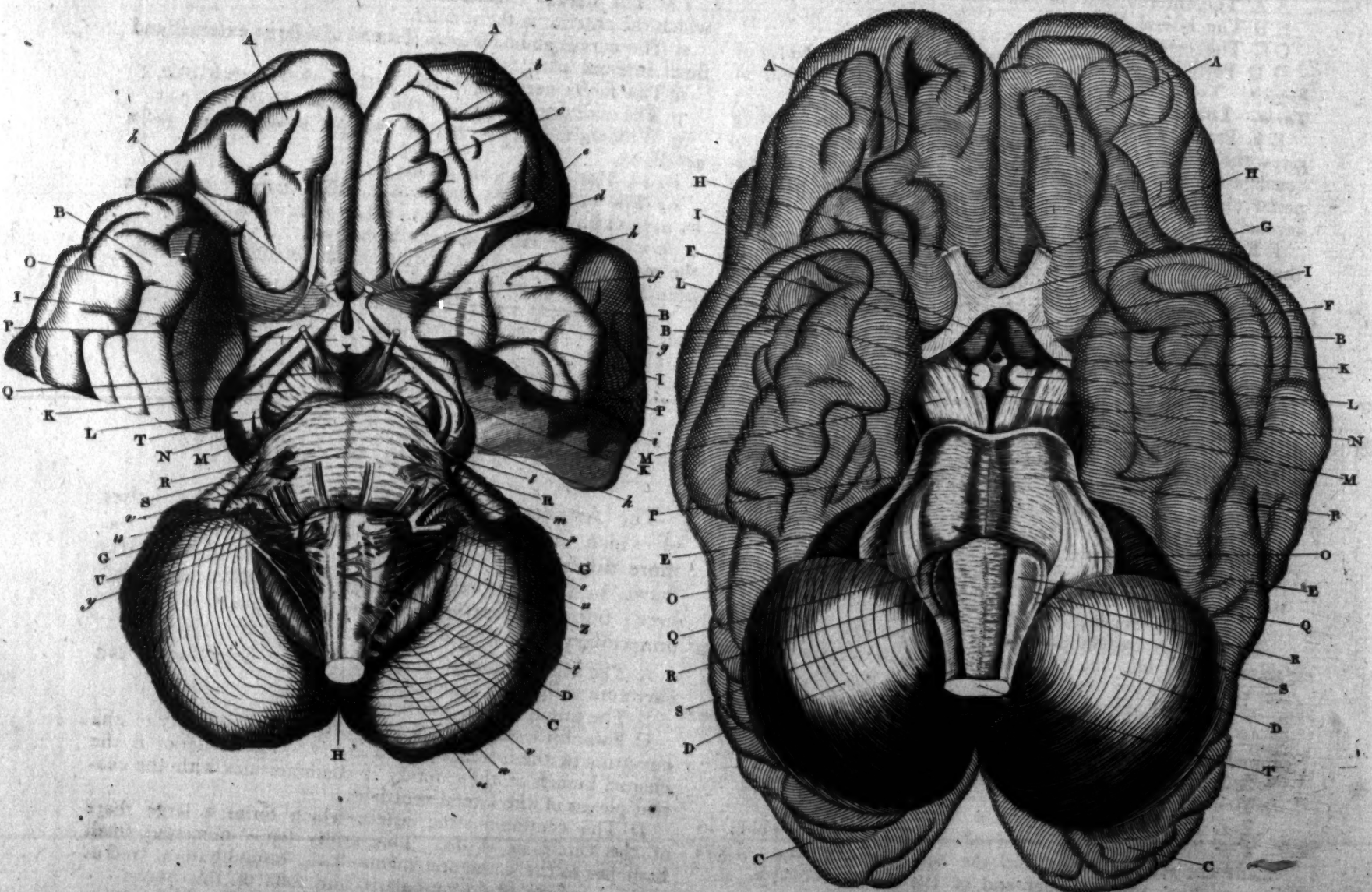
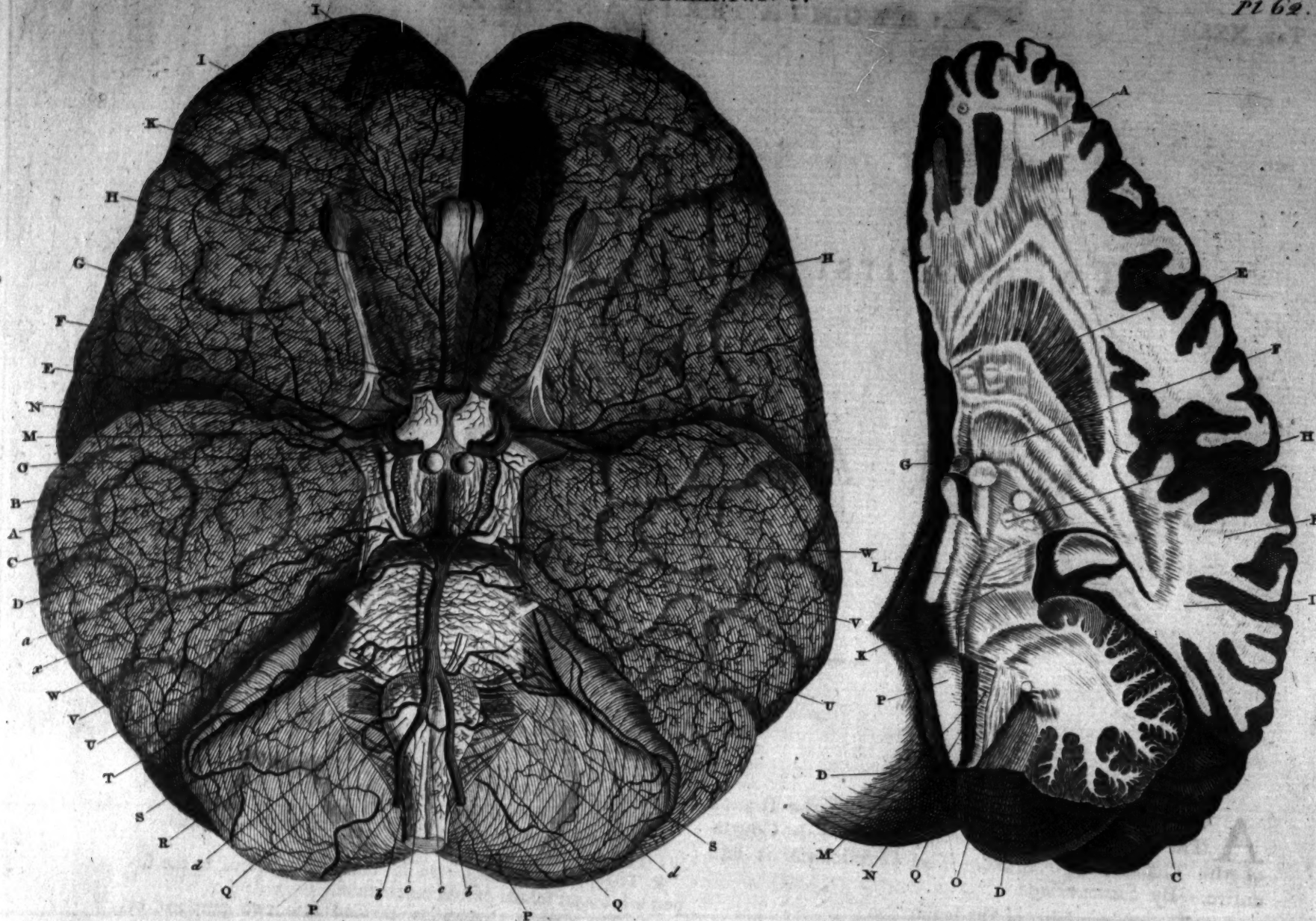
q q Elevations which may be called Lobules of the par vagum.

r r Superior and internal lobule of the cerebellum.

s s The superior and external lobule of the cerebellum.

t The temporal surface of the cerebellum.

u The occipital surface of the cerebellum.



T H E

Twenty-first Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

FIGURE I.

A VIEW of a large share of the Base of the Brain: The Posterior Lobes are removed to shew the Course of the Thalami Optici, &c. The Cerebellum is left entire. By Soemmerring.

A A The anterior lobes of the brain.

B B The lateral lobes.

C C The cerebellum.

D D Portiones cerebelli processus vermiformes æmulantes of *Ruyfcb.* Tubercula lateralia anteriora interiora cerebelli of *Tarin.* Lobules de la Moëlle allongee of *Vicq. d'Azyr.*

E E Processes of the cerebellum to which Soemmerring gives the name of Partis anterioris superioris cerebelli portio quædam fulcis notata. By others they are divided into the superior and external, and superior and internal lobules of the cerebellum.

F F Lobules of the par vagum, upon which are situated this pair, and the plexus choroides of the fourth ventricle.

G G The choroid plexus of the fourth ventricle.

H H The separation of the lobes of the cerebellum.

I I A part common to the anterior and lateral lobes of the brain, and where the fissure of Sylvius begins.

K K The crura or pedunculi cerebri.

L M N The posterior tubercles of the thalami optici.

O The infundibulum.

P P The eminentiæ mammillares, or candicantes.

Q An excavation called by *Vicq. d'Azyr.* the Fossa of the Nervi Oculo-musculares. The medullary substance forming the bottom of this cavity is called by authors, Pons Tarini.

R R Pons Varolii or tuber annulare.

S A depression made by the arteria basilaris. Numerous transverse medullary tracts are seen upon the surface of the tuber.

T Foramen cæcum anterius.

U Foramen cæcum posterius. This and the former penetrate a little into the tuber annulare, and receive a plexus of vessels.

V V The right crus cerebelli.

W The end of the medulla oblongata, and beginning of the spinal marrow.

X X The corpora pyramidalia.

Y Y The corpora olivaria.

Z Z The corpora pyramidalia lateralia.

a A medullary tract observed by *Sanctorinus*, which in many subjects extends from the upper end of the corpora pyramidalia, to the under end of the corpora olivaria.

b Separation of the anterior lobes of the brain.

c Furrow made by the olfactory nerve.

d The left olfactory nerve turned aside.

PART. III.

e The bulb of this nerve.

f The long and external root.

g The long internal root. The internal and short root is not here represented. The right olfactory nerve is cut across to shew its triangular form.

h The optic nerve continued from the tractus opticus.

i The oculo-muscularis.

k The pathetic nerve. In its course it adheres to the superior internal lobule of the cerebellum.

l m The nervus trigeminus, divided into two portions, of which the anterior is the smaller.

n The nervus abductor oculi, formed of a large external and small internal part.

o The facial nerve, or portio dura of the seventh pair.

p The auditory nerve, or portio mollis of the seventh pair.

q *Wrisberg's* Fibrillæ nervæ ad par communicans faciei accessoriæ.

r s s s The eighth pair of nerves.

r r The ramus glosso-pharyngeus. The right nerve is in its natural situation, the left one is turned inwards.

s s s The par vagum of the eighth pair. In the right-side the nerve is in its natural situation, in the left-side some of the branches are turned inwards.

t t The lingual nerve, the right one in its proper place, part of the left turned inwards, to shew the roots of the nervus accessorius.

u u u The nervus accessorius ad par vagum.

v First cervical nerve, or sub-occipital nerve.

w Second cervical nerve.

FIGURE II.

The Arteries of the Base of the Brain, the Lobes of which are a little separated from each other, the more distinctly to shew the Vessels. Most of the Parts shewn in the two preceding Figures are also represented here; but a description of them, in this place, is thought unnecessary.

A The right internal carotid artery cut across at its last curvature within the cranium.

B The origin of the ophthalmic artery.

C Two little branches sent off from the convexity of the curvature of the internal carotid artery. The posterior is the choroid branch of the carotid; it communicates with the choroid plexus of the lateral ventricles.

D The communicating artery which forms a large share of the Circle of Willis. This artery sends numerous small branches to the eminentia mammillaris, infundibulum, tractus opticus, nervus oculo-muscularis, and fossa of this nerve.

a A branch more remarkable than the rest, which runs to

the

the inferior extremity of the choroid plexus, and may be called the Choroid branch of the communicating artery. The carotid artery afterwards divides into two principal branches, the one anterior, the other posterior.

E The anterior branch running between the optic nerve and brain, and then continued forwards under the name of Arteria Callosa.

F A branch by which the carotids communicate with each other.

G Branches to the optic and olfactory nerves, and to the neighbouring circumvolutions.

H The inferior cerebral branches of the arteria callosa. They give branches to the olfactory nerve, and communicate with the extremities of the Sylvian artery.

I I The anterior and internal cerebral branches of the arteria callosa, dispersed upon the internal surface of the anterior lobes.

K The arteria callosa reflecting upon the corpus callosum, which it follows almost to its posterior extremity. In this course it gives branches to the inner side of the cerebral hemispheres. The falx, and the anterior part of the tentorium receive numerous branches from it. One branch penetrates into the third ventricle, and gives small branches to the fornix, commissura anterior, and fore-part of the septum lucidum; from it also the choroid plexus of the lateral ventricle receives some branches.

L The external branch of the carotid, and which may be considered as the trunk: It is called by some, Sylvian artery, from its situation in the fossa of that name. The first branches sent from it are very delicate, they go to the substance of the brain at the roots of the olfactory nerves.

M N O The three branches into which the Sylvian artery commonly divides. The middle one N, is placed in the bottom of the fissure of Sylvius, and makes a separation between the anterior and lateral lobe of the brain. These branches afterwards divide into numerous smaller ones, which plunge into the substance of the brain. Anteriorly they communicate with branches of the arteria callosa, and posteriorly with those of the deep cerebral arteries.

P P The vertebral arteries at their entry into the cranium.

b b Small branches sent to the spinal marrow and its nerves.

Q Q The large deep or inferior arteries, called by Haller, Arteria Cerebelli Profunda. They commonly differ from each other, either in their size or direction in the opposite sides. After giving branches to the surface of the medulla oblongata and cerebellum, they turn round between these bodies, and penetrate to the fourth ventricle, sending branches to it, to its choroid plexus, and to the cerebellum itself.

c c The anterior spinal arteries arising near the preceding, and sending off a communicating branch near their origin.

d d Many small arteries sent from the vertebral arteries, to the top of the medulla oblongata and its nerves.

R The arteria basilaris, formed of the two vertebral arteries.

S S The small deep or inferior arteries of the cerebellum, on each side, called by Haller, Ramus Cerebelli inferior alius.

T The division of the basilar artery into four principal branches.

U U The arteria cerebelli superior; the Ramus anterior of Haller.

FIGURE III.

The Brain inverted, on which are seen the Crura Cerebri and Cerebelli, the Tuber Annulare, and Medulla Oblongata, the Arachnoid Coat and Pia Mater being removed, in order to show the general direction of their Medullary Fibres.

A A B B C C The anterior, middle, and posterior lobes of the brain, slightly sketched.

D D The hemispheres of the cerebellum.

E E The superior and anterior vermiform processes of the cerebellum.

F F The two optic nerves cut horizontally.

G The intimate intermixture of their medullary substance.

H H The optic nerves cut across near the foramina optica.

I I Cineritious substances intimately connected to the optic nerves, and furnishing some part of their medullary substance: Between these there is a fissure, through which the pia mater and blood-vessels pass.

K A section of the infundibulum.

L L The corpora albicantia behind the infundibulum.

M M The crura cerebri, consisting on their surface, of bundles of medullary fibres.

N A cineritious substance joining the crura cerebri, and corpora albicantia of opposite sides of the brain.

O O The principal crura cerebelli.

P P The tuber annulare, or Pons Varolii, the surface of which consists of medullary fibres laid chiefly in transverse bundles.

Q Q Anterior, oblong, and somewhat pyramidal bodies, composed, on their surface, of medullary fibres, disposed transversely, and passing from one side to the other of the medulla oblongata, or joining these two pyramidal bodies intimately together. Between these pyramidal bodies, there is a fissure above a quarter of an inch deep, into which the pia mater enters, and, still deeper, vessels pass between the decussating bundles of medullary fibres.

R R The bodies commonly called Olivaria.

S S A small part seen of oblong, medullary and somewhat pyramidal bodies, which form the back-part of the medulla oblongata.

T The end of the medulla oblongata, or top of the spinal marrow.

FIGURE IV.

Represents a Section of the Brain and Cerebellum, with their Crura, the Tuber Annulare, and Medulla Oblongata, in order to show a great intermixture of cineritious substance with the Medullary, and very various directions and interlacing of the bundles of the Medullary Fibres.

A B The anterior and middle lobes of the brain cut.

C The posterior lobe of the brain entire.

D D The hemisphere of the cerebellum.

E The corpus striatum.

F The thalamus nervi optici.

G One of the corpora albicantia, composed of a medullary crust containing cineritious matter.

H The crus cerebri.

I The crus cerebelli.

K The tuber annulare cut perpendicularly from right to left.

L The tuber annulare cut perpendicularly from before backwards, to more than the depth of a quarter of an inch.

M N O The medulla oblongata cut perpendicularly from right to left.

P The medulla oblongata entire on the left-side of the fissure into which the pia mater enters.

Q The end of the medulla oblongata, or top of the spinal marrow.

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Fig. 1.

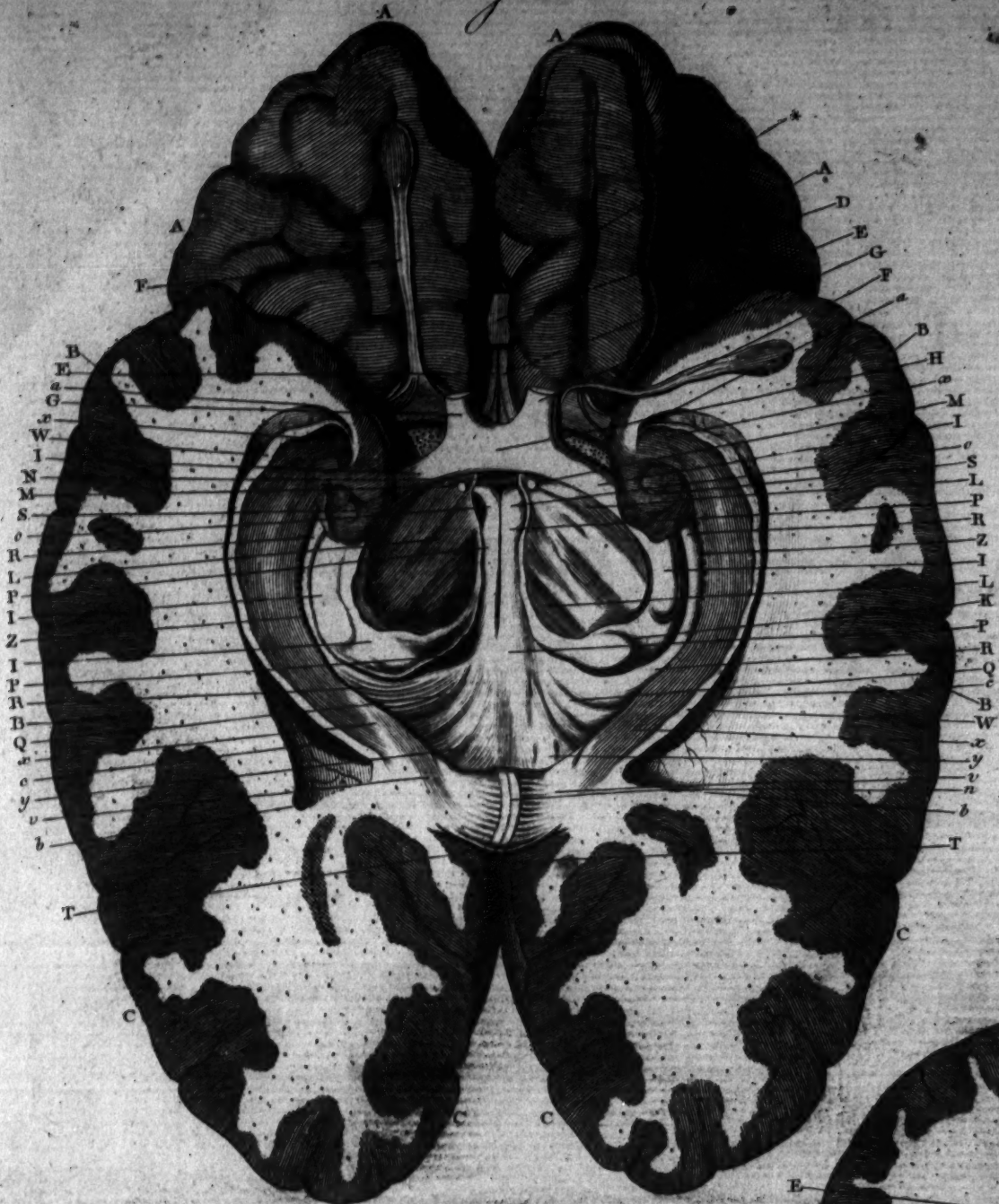


Fig. 5.

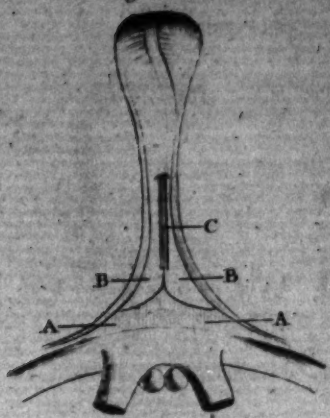


Fig. 4.

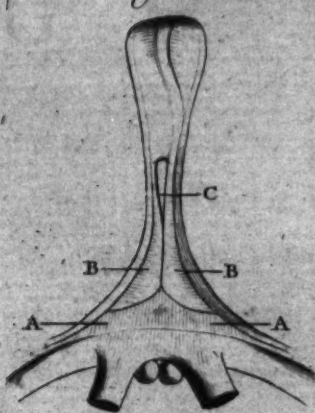


Fig. 2.

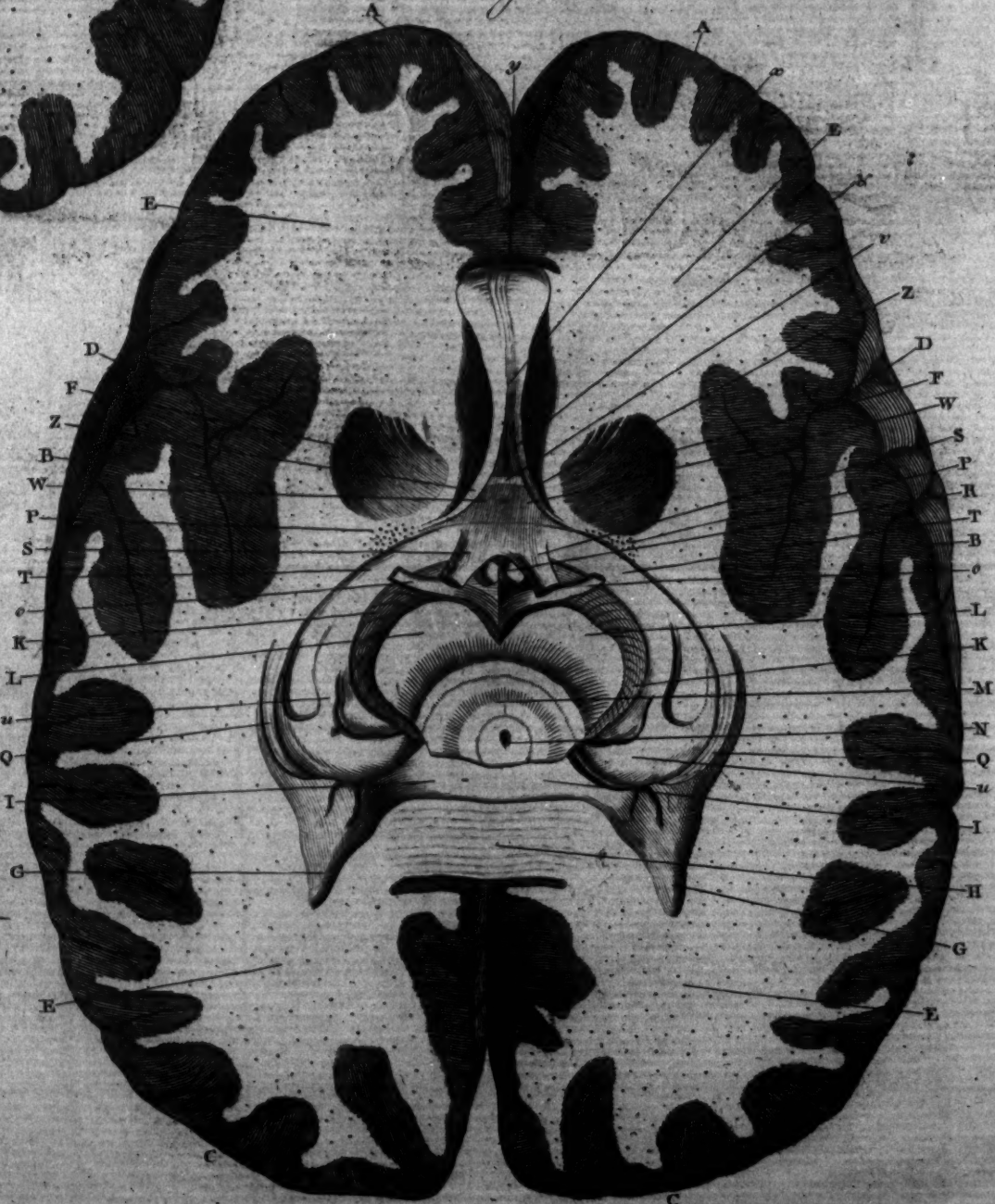
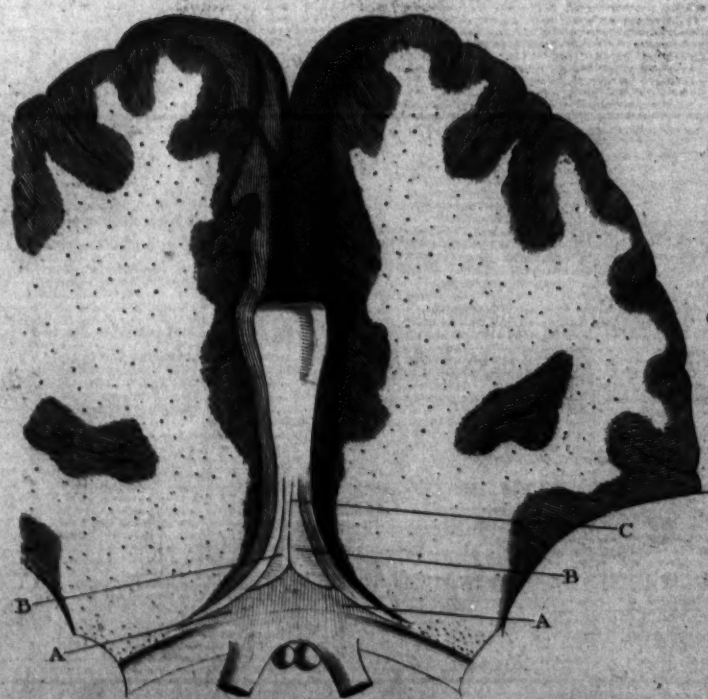


Fig. 3.



T H E

Twenty-second Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

FIGURE I.

REPRESENTS the Brain viewed on its Base, and dissected in such a manner as to shew an horizontal incision of the Cornua Ammonis, or great Hippocampi. The gray and white substances, and the indented portion of these productions, are seen. Each of the Optic Thalami have been cut obliquely from without internally, and from top to bottom, and the inferior surface of the vault, is discovered.

A A A A Anterior lobes of the brain.
B B B B The middle lobes.
C C C C The posterior lobes.
D Anterior boundary of the corpus callosum.
E E Peduncles of the corpus callosum.
F F Olfactory nerves, right and left, the latter of which is not *in situ*.

* Long olfactory furrow, in which the left nerve of that name was situated.

G G The optic nerves.
H The junction of these nerves.
I I I I The *tractus* opticus.

K Posterior enlargement, or tubercle of the optic thalami.
L L L Optic thalamus cut obliquely from top to bottom, and from right to left, in that place where the crura of the brain are inserted.

M M Horizontal section of the mammillary eminences.
N Commissura anterior.

O O Anterior pillars of the medullary triangle, or vault with three pillars.

P P Continuation of the same columns or pillars, which become enlarged.

Q Q Posterior and inferior portion of the medullary triangle, or vault with three pillars; where may be seen a minute embroidery, or small fibres, which may be compared to the cords of a lyre.

R R R R Posterior columns or pillars of the medullary triangle, terminating in a white medullary small fillet, named *Tænia Hippocampi*, and, improperly, *Corpus Fimbriatum*.

S S Enlargement of the great hippocampus, which is found towards the anterior and inferior part of the brain, where is seen a mixture of a white and gray substance forming irregular spires.

T T Posterior boundary of the corpus callosum.
U A portion of the raphe of the same corpus, which is curved behind and below.

V V Origin of the cornu ammonis, or great hippocampus on the sides of the corpus callosum.

W W White cover of the cornua ammonis, which shews their section under the form of a small medullary fillet. This white substance is continued along with that of the neighbouring cerebral circumvolutions.

X X X X Great hippocampi cut horizontally, and very near their middle.

Y Y The tract of the cortical substance which accompanies the great hippocampus towards its internal margin, and which white substance of the corpus callosum is contiguous to the cortical substance of the nearest cerebral circumvolutions.

Z Z Inner edge, concavity, or indented margin, of the great hippocampus. This margin is formed of a gray substance, and is contiguous to the *tænia hippocampi*.

a a Anterior and inferior portion of the case of the great hippocampus, which forms the inferior prolongation of the lateral ventricles.

b b Portion of the posterior prolongation of the same ventricles, or of the ancyroid cavity.

c c Posterior portion of the choroid plexus of the lateral ventricles.

FIGURE II.

This Figure represents the Brain dissected through its Base, and cut almost horizontally at the height of the Nerves and Optic Tract. This preparation is intended to bring into view the anterior and inferior part of the Corpus Callosum; the Medullary partition of the third Ventricle; the passage of the Optic Nerves into the Base of the Brain; the inferior extremity of the *Tænia semicircularis*, and a section of the Crura of the Brain, near the Annular Protuberance.

A A The anterior lobes of the brain.

B B The lateral lobes.

C C The posterior lobes.

D D Ridge of *Sylvius*, with its divisions.

E E E E Medullary substance of the brain, in which are observed points of a red colour, which are occasioned by the section of the small arteries.

F F Deep portion of the corpora striata.

G G Part of the posterior prolongation of the lateral ventricles, in which the *spur*, or small hippocampus, is shut up.

H Horizontal section of the posterior boundary of the corpus callosum. Here the white transverse fibres are seen.

I I A somewhat oblique section of the corpora quadrigemina.

K K The

KK The crura of the brain, which a little farther off are dissected from right to left, in the region where these productions are blended with the annular eminence, and under the oculo-muscular nerves.

LL Medullary portion of the crura of the brain.

M Various segments of a white, ash, or red colour, somewhat concentric, which are disposed round the opening marked **N**.

N Section of a narrow conduit, which passing under the tubercula quadrigemina, reaches to the third or fourth ventricle.

OO Oculo-muscular nerves, or those of the sixth pair. They arise in a fossa, situated between the crura of the brain.

PP Perforated substance into which numerous vessels enter. It is found near the fibres where the olfactory nerves partly arise.

QQ Inferior portion of the tænia semicircularis. The small threads which compose the extremity, are observed sometimes separate from one another, instead of being re-united.

R Mammillary eminences, called *Eminentie Candicantes*.

SS Optic nerves cut at their entrance into the orbit, and turned backward, to obtain a view of the partition of the third ventricle.

TT *Tractus* opticus in the form of a rounded cord, which on one part is continued with the optic nerves **SS**, and which on the other becomes enlarged at **UU**. It becomes still larger behind, where it forms three kinds of projections or eminences. The *tractus* opticus is blended with the thalami which bear the same name.

V Commissura anterior.

WW Pulpous partition of the third ventricle. *Tarin* (Advers. Anat. Pag. 3.) has distinguished it by the name of *Pars infundibuli anterior sua peculiari substantia circumscripta*.

X Place where the corpus callosum becomes smaller.

Y Anterior boundary of the corpus callosum.

ZZ White cords or tracts, which proceed in a diverging direction from the corpus callosum, towards the perforated

substance, near the origin of the olfactory nerves, called Peduncles of the Corpus Callosum.

& A very strait longitudinal excavation, which is formed by two small imbosses, or cords, situated between the peduncles of the corpus callosum.

FIGURE III. IV. V.

The explanation of the letters is in general the same as in Figure II.

Notice is taken only of some varieties in the size and direction of the fibres of the lamina, which shuts up the third ventricle. This lamina covers entirely the anterior commissure in Figures IV. V.

The anterior and inferior portion of the corpus callosum varies much also in Figures III. IV. and V.

The peduncles of the corpus callosum are here seen as in Figure II. **ZZ**.

The cords situated between these two peduncles are much more voluminous than in Figure II.

They are seen in **BB**, Figure III. IV. and V.

The cavity of the case of the septum lucidum, is also very different in these three subjects.

In **C**, Fig. III, it is so narrow as to exhibit only the appearance of a simple line.

In **C**, Fig. V. it is lengthened and strait; and in **C**, Fig. IV. it is triangular.

In Fig. II. III. this excavation extends to the anterior commissure.

In Fig. IV. V. it is separated from it by a space more considerable in Fig. IV. than in Fig. V.

When a vertical section of the brain is made into two parts, the one right and the other left, it is necessary to make the incision with much caution, in the same direction as in Figures II. III. IV. V. in order to separate the two laminae of the septum lucidum, in such a manner that they may be left one on each side. This Anatomical problem is certainly of very difficult solution. It is on this account it has been thought necessary to describe all these various circumstances.

D
arch
ation

Fig. 1.

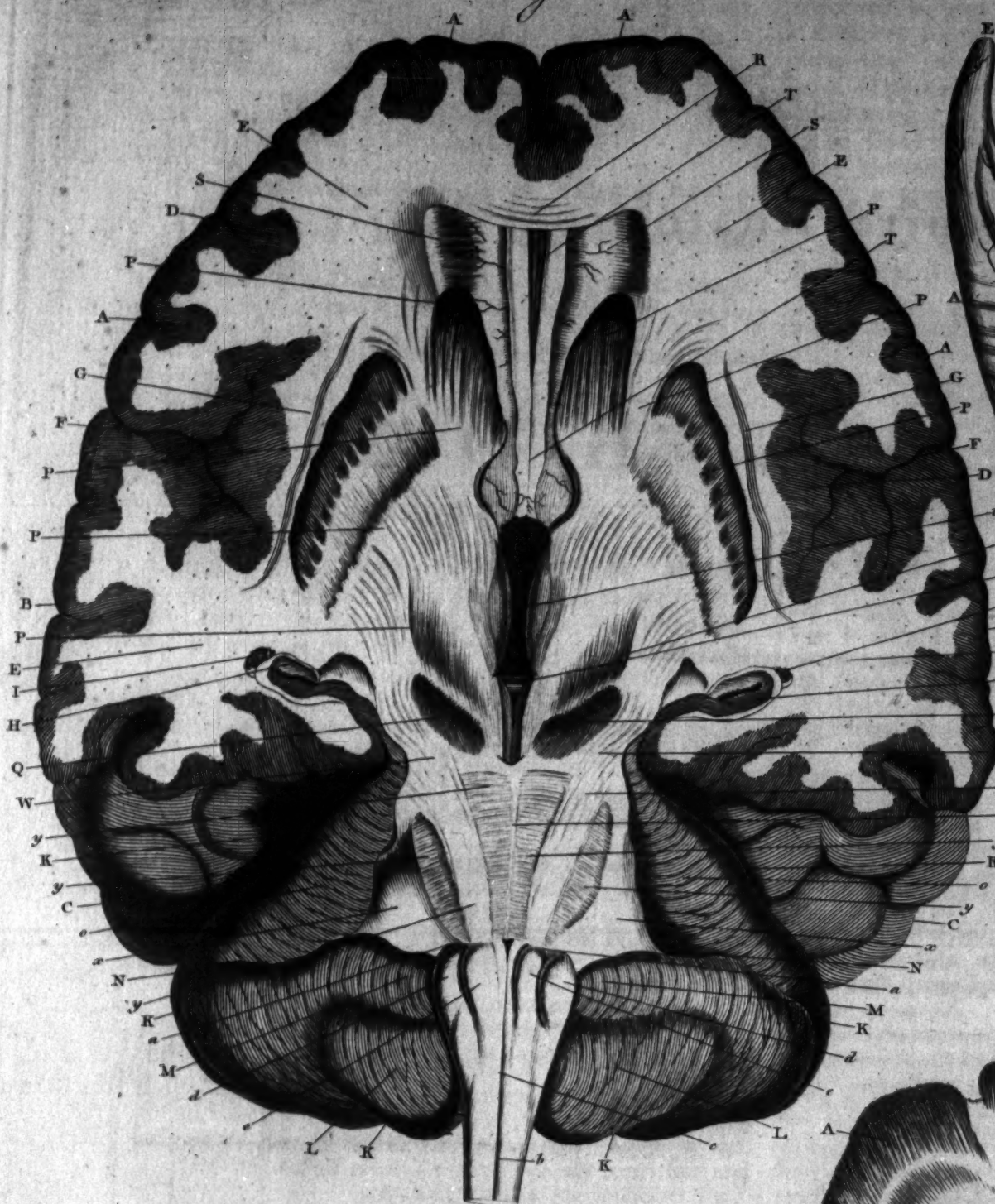


Fig. 3.

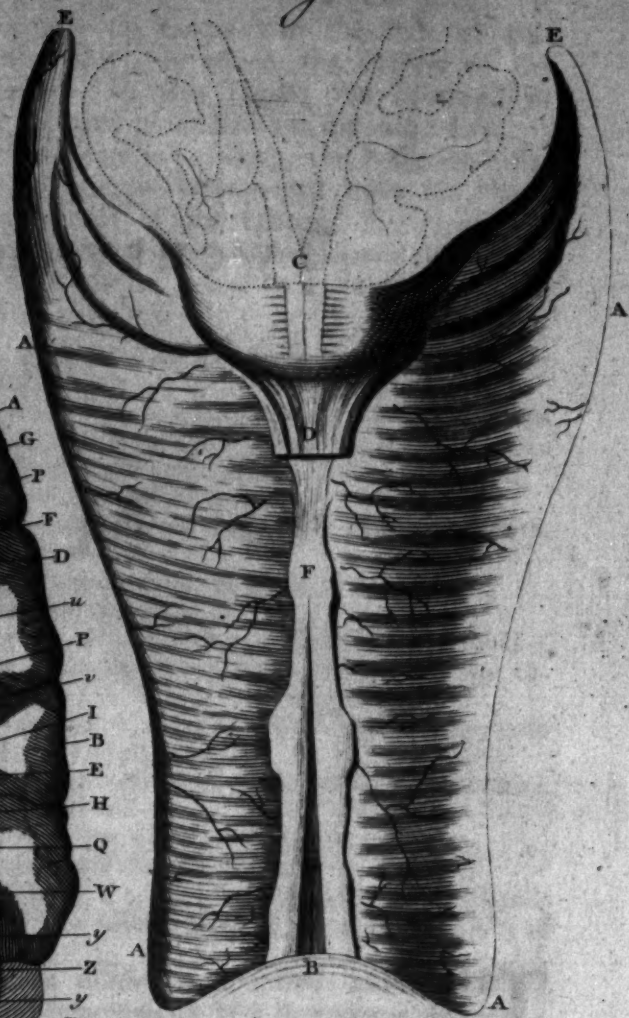


Fig. 2.

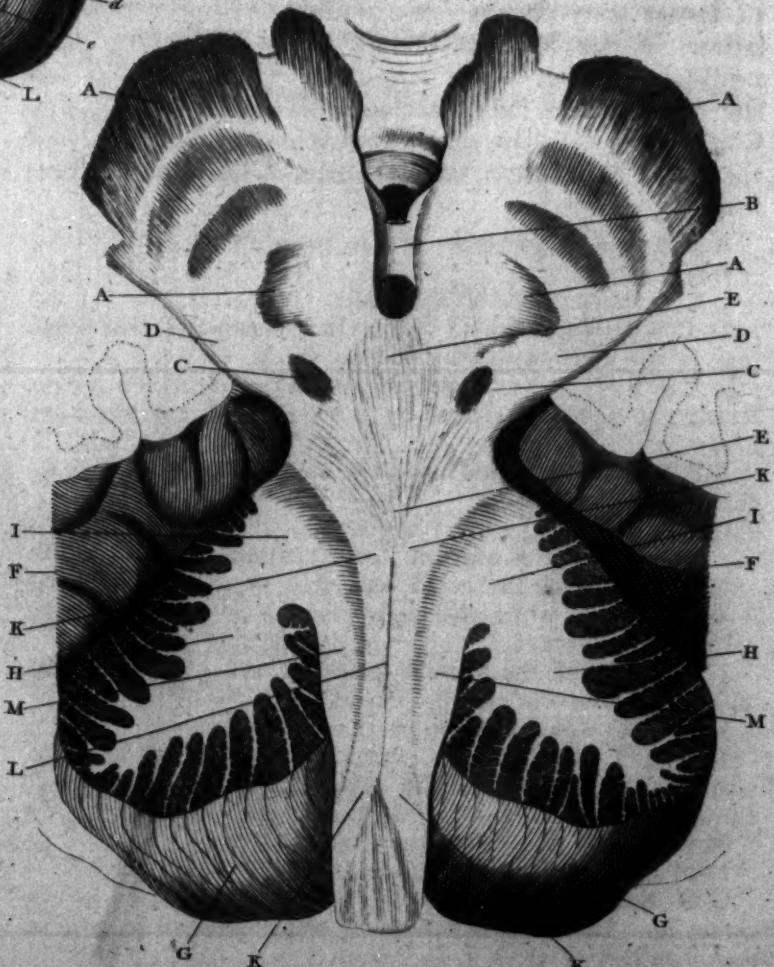
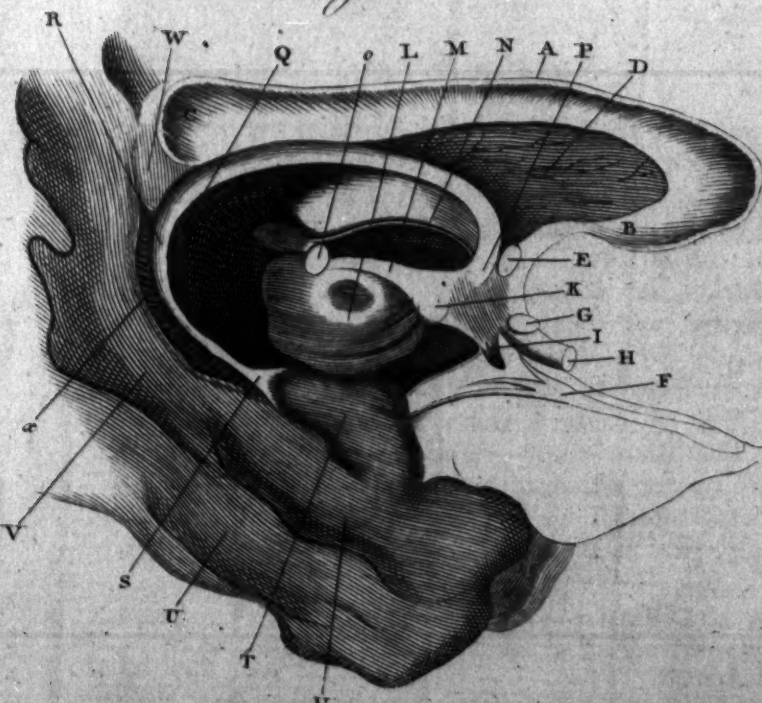


Fig. 4.



T H E

Twenty-third Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

FIGURE I.

THE Brain being reversed so as to present the Base uppermost; if a horizontal incision be made, commencing in a level with the corpora pyramidalia, and continued along the thickness of the Tuber Annulare, of the Crura of the Brain, of the Corpora Striata, laterally, anteriorly, and backwardly, and of the corresponding parts of the two Hemispheres; such a preparation as this is obtained.

The study of this plate is interesting, as it represents to better purpose than any possible descriptions the relations of the Medulla Oblongata, and Corpora Pyramidalia with the Tuber Annulare, with the Crura and the whole Medullary substance of the Brain. The Corpora Striata, the third Ventricle open beneath, and the Anterior Portion of the Corpus Callosum, are here seen.

A A A A Anterior lobes of the brain.

B B Lateral.

C C Posterior lobes of the brain.

D Cortical substance of the brain forming different windings in the circumvolutions of this viscus.

E E E E White substance of the brain, on which are observed red points, produced by the section of the blood-vessels.

F F Ridge of Sylvius, with the circumvolutions which accompany it.

G G Very faint cortical tracts, which are found between the ridge of Sylvius and the corpora striata.

H H Section of the cornu ammonis, the exterior of which is formed of a white thalamus, and the interior of an ash-coloured substance.

I I Portion of the choroid plexus of the great ventricles, which has been cut in this preparation.

K K K K Circumference of the cerebellum.

L L M O View of the under part of the cerebellum; where its circumvolutions are observed, forming various small elevations decussating each other in several points.

M M Lobule of the nervus vagus.

N N Groove of the crura cerebelli.

O O Portion of the anterior and inferior surface of the cerebellum, the circumvolutions of which proceed in a different direction to those L L.

P P P P P P P P Various arches of the corpora striata, the thalamus nervi optici, the crura cerebri, composed of an intermixture of cineritious and medullary substance.

PART III.

Q Q The *Locus niger crurum cerebri*.

R Section of the anterior boundary of the corpus callosum, the bands of which are situated transversely.

S S Inferior surface of the anterior portion of the corpus callosum.

T T Division of the septum lucidum, the two blades of which are very distinct; they are very narrow, especially before.

U Cavity of the third ventricle open below, and which is bounded superiorly by an interlacement of vessels, named the Choroid plexus.

V Commissura posterior, seen inferiorly.

W W The crura cerebri.

X X White substance of the crura cerebelli, cut horizontally.

Y Y Y Y The tuber annulare cut horizontally, in a level with the corpora pyramidalia, e e.

Z A *Raphe*, which seems to divide the tuber annulare into two parts, the one right, the other left.

a a Origin of the medulla oblongata.

b The medulla spinalis, separated into two cords by the small ridge, c.

d d *Eminentiae olivariae*.

e e Corpora pyramidalia, situated on the anterior part of the medulla oblongata.

FIGURE II.

This incision made upon the Brain, a view of the Base of which is given, is deeper than the preceding. The Medulla Oblongata has been cut to the middle, and the Section continued horizontally throughout the whole extent of the Brain. The greater part of the *tracts*, bands, or arches, which are seen in the foregoing Figure, are found here. This dissection of the Brain, made either from above or from below, by successive cuts from its surface towards its centre, shows the structure of each of the parts which compose the Brain. The Brain employed for this preparation, was hardened by the action of a mixture of Spirit of Wine and Marine Acid. A detailed explanation of those parts only, which are peculiar to this Figure, is here given.

A A A A Internal parts of the corpora striata, composed of an intermixture of medullary and cineritious substance, variously striated.

B Commissura mollis of the optic thalami, seen below.

C C The black spot, or *locus niger* of the crura of the brain.

brain. They are here much smaller than in the preceding figure.

D D The crura cerebri.

E E Filaments intermixed with the white and ash-coloured substance, resembling a pencil. They are found about the middle of the annular protuberance.

F F Posterior lobes of the brain.

G G Occipital surface of the cerebellum.

H H White substance situated in the middle of the cerebellum.

I I And white substance of the crura cerebelli, cut horizontally.

K K K K White tracts seen on the two sides of the chink, or very narrow groove of the anterior surface of the medulla oblongata.

L Chink or groove of the anterior region of the medulla oblongata.

M M Lateral spaces of the medulla oblongata, which correspond to the part where the corpora olivaria were, and a part of the corpora pyramidalia. The transverse filaments are seen here.

FIGURE III.

Represents the under-part of the Corpus Callosum, the remainder of the *Septum lucidum*, and of the medullary triangle, the superior part of the Lateral Ventricles, and a Portion of the Posterior Prolongation of the same Cavities.

A A A A The corpus callosum.

B Anterior margin of the corpus callosum, the transverse fibres of which are seen blended in the horizontal section of the brain.

C Posterior edge of the corpus callosum, with a portion of its raphe, and the transverse fibres situated laterally.

D Posterior portion of the medullary triangle, which is attached to the posterior and inferior region of the corpus callosum.

E E Posterior prolongation of the lateral ventricles.

F G The course of the septum lucidum, the two laminae of which are distinctly seen, especially in G.

FIGURE IV.

In this Figure is seen a perpendicular Section of the Brain, made through its Base, and represented in an oblique direction, for the purpose of shewing how the inferior prolongations of the Lateral Ventricles may be

penetrated without injuring any part of the Brain. It is sufficient to raise up carefully in the Base of this viscus that part which is called the *Crochet* of the Great Hippocampi. In this Figure the indented or plaited margin of these productions is distinctly seen.

The Optic Thalamus is cut deep, the Posterior Pillar of the Medullary Triangle is removed from the Pineal Gland; a great extent of the Choroid Plexus is seen, and the inferior prolongation of the Lateral Ventricles is more open than in the natural state, to obtain a view of all the parts of this design.

A B C The corpus callosum cut vertically and horizontally through the middle.

D Left limb of the septum lucidum, upon which are several ramifications, which are furnished by the great choroid plexus.

E Section of the anterior commissure.

F Olfactory nerve, with its roots.

G Section of the optic nerves at the place of their junction.

H Left optic nerve.

I Section of the infundibulum, or pituitary stalk.

K Left mammillary eminence.

L Reddish spot environed with a circle of white substance, in the thickness of the optic thalamus, which is here cut obliquely in a level with the mammillary eminence.

M Whitish space, which extends from the mammillary eminence to the posterior commissure.

N Remainder of the commissura mollis of the optic thalami.

O The posterior commissure.

P Anterior pillar of the vault, or medullary triangle.

Q Portion of the great choroid plexus.

R Posterior pillar of the medullary triangle, which extends on one part in P, and on the other, in S, to the extremity of the cornu ammonis.

S This last portion of the pillar of the medullary triangle, called *Tenia hippocampi*, and improperly *Corpus fimbriatum*, is formed of a white substance, and expands over a portion of the cerebral substance, which forms the base of the great hippocampus, or cornu ammonis.

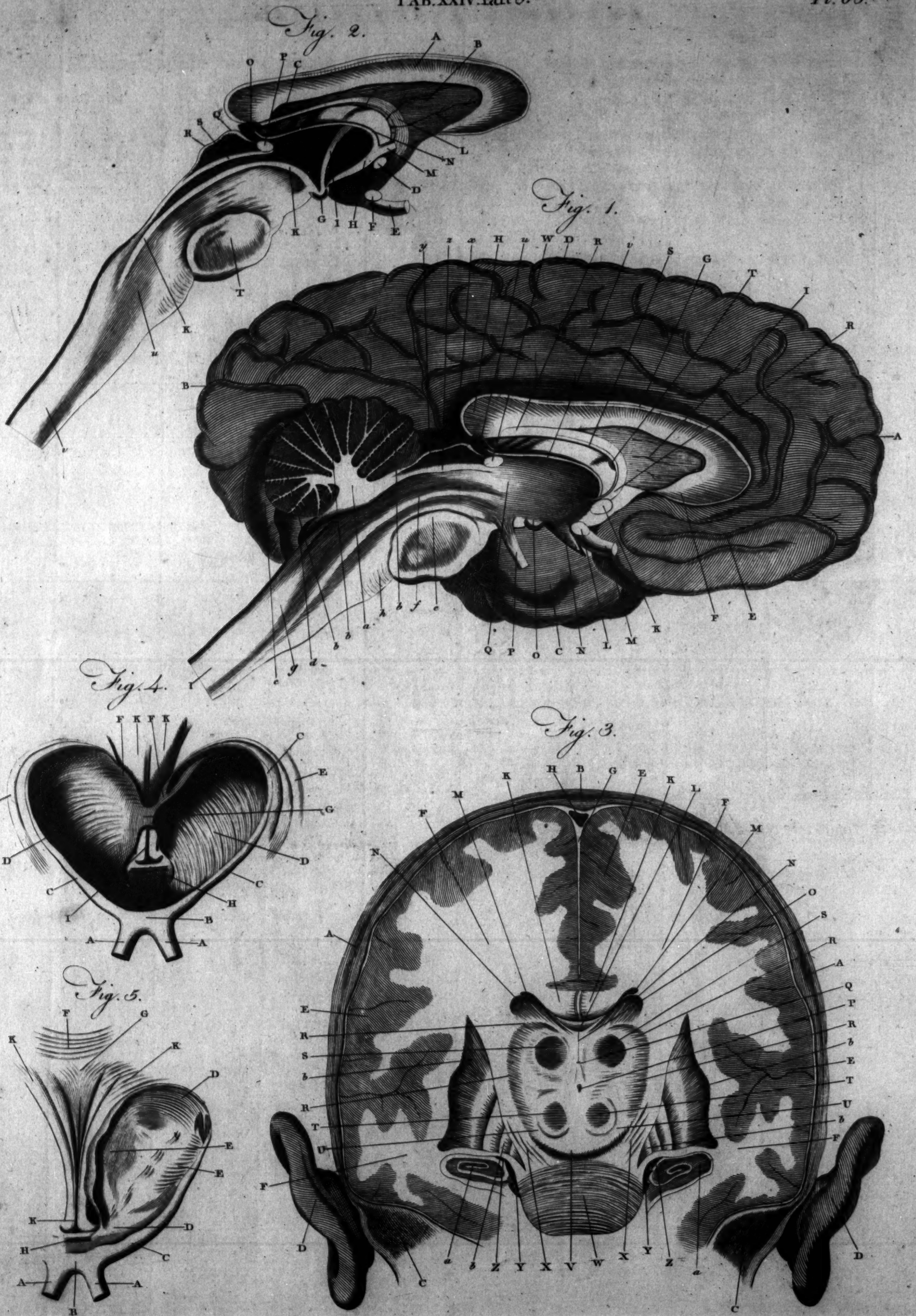
T Cerebral circumvolution, which forms what is called *Crochet* of the great hippocampus.

U Cerebral circumvolutions situated near the *Crochet* of the great hippocampus.

V Circumvolutions situated near the great hippocampus, or cornu ammonis, and which serve to form its Case, or Sheath.

W Origin of the great hippocampus in a tract of ash-coloured substance.

X Indented border or notched portion of the great hippocampus.



T H E

Twenty-fourth Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

FIGURE I.

REPRESENTS the left half of the Brain. This preparation is extremely difficult to make. It has been designed from a Brain viewed on its Base, the convex surface of which was turned downward. This position was necessary to prevent the numerous projectures which the Base of this organ presents to view, from being deformed by pressure.

- A Anterior lobe of the brain.
- B Posterior lobe of the brain.
- C Deep portion of the middle lobe, which is received into the middle *fossa* of the brain.
- D Middle lobe of the brain.
- E A circumvolution, the windings of which are parallel.
- F G H The corpus callosum cut vertically and horizontally through the middle. In G is seen a portion of its superior surface and raphe,
- I Left limb of the septum lucidum, upon which are several ramifications which are furnished by the great choroid plexus.
- K Section of the commissura anterior.
- L Section of the optic nerves at the place of their junction.
- M Left optic nerve.
- N Section of the infundibulum, or pituitary stalk.
- O Left mammillary eminence.
- P Motor-oculi, or nerve of the third pair.
- Q Internal surface of the optic thalamus.
- R R Left portion of the medullary triangle, or vault with three pillars.
- S Very small portion of the tænia semicircularis.
- T Portion of the great choroid plexus; where also is seen the anterior and internal tubercle of the optic thalamus.
- U The pineal gland, in which is observed a small white tract produced by the posterior part of the peduncle.
- V The peduncle of the pineal gland. It becomes rounded anteriorly, and disappears near the anterior pillar of the medullary triangle.
- W Posterior commissure.
- X Y *Tubercula quadrigemina*, superior and inferior.
- Z Communication of the third ventricle, or ventricle of the optic thalami, with the fourth ventricle, or ventricle of the cerebellum.
- a Trunk and principal branches of the medullary substance in the interior of the cerebellum, from which
- b b b The medullary ramifications are seen to issue, the reunion of which forms what is commonly called the *Arbor vitæ*.
- c Posterior margin of the cerebellum.
- d Portion of the choroid plexus of the cerebellum.
- e f Various tracts of the more or less white substance, and which are extended over the medulla oblongata,

FIGURE II.

Presents a view of the same parts with the centre of the preceding Figure: But the organs are prepared in such a manner, as to represent the proportions of the different cords or tracts, with the Medullary eminence and intermediate space. A portion of the internal partition of the Optic Thalamus has been elevated, to obtain a view of the prolongation of the Medullary tracts. The Anterior Pillar of the Medullary Triangle has been detached and cut, to obtain a view of the whole extent of the Tænia Semicircularis, of which there is only a small portion seen in the preceding Figure. Here the Corpus Callosum is raised up, and the Posterior and narrow portion of the Septum Lucidum is seen, which is not perceivable in Figure I.

- A The corpus callosum cut vertically and horizontally through the middle, and raised up so as to show the posterior and narrow portion of the septum lucidum.
 - B Anterior portion of the septum lucidum, upon which are several ramifications supplied by the choroid plexus.
 - D Section of the anterior commissure.
 - E Left optic nerve.
 - F Section of the optic nerves at the place of their junction.
 - G Left mammillary eminence.
 - H Stalk of the medullary substance, which proceeds from the junction of the anterior pillar of the medullary triangle, cut in M, with the peduncle of the pineal gland.
 - I A white cord which rises from the mammillary eminence G, and proceeds in a curved direction to the anterior and internal tuber of the optic thalamus. In the mammillary eminence it mixes with the stalk H, and with
 - K K Some white tracts of the medulla oblongata.
 - L Anterior portion of the tænia semicircularis, the fibres of which divide and disappear towards the anterior and internal part of the corpora striata, in the white substance which it there meets with, and before the commissura anterior.
 - M The anterior pillar of the medullary triangle dissected.
- The subsequent letters pointing to parts already explained in the preceding figure: the Reader is therefore referred to it.

FIGURE III.

Represents a perpendicular Section of the Brain, from right to left, in the middle region of this organ.

- A A Vertical section of the bones of the cranium, which are composed of two osseous laminae and of the *diploe*.

B Section

B Section of the same bones in the part which corresponds to the crown of the head, or vertex.

C C Section of the temporal bone in the mastoid region.

D D Cartilages of the ears.

E E Circumvolutions of the brain, composed of cortical substance, which forms various hollows in the medullary.

F F F F The medullary portion of the hemispheres of the brain.

G H Section of a vertical production of the dura mater, called the Falx of the brain. In H is seen a section of the superior longitudinal sinus, of an irregular triangular form. Different black points observed in the thickness of the falx, mark the veins which spread between the membranes of this production. Their orifices possess this peculiarity, that almost all of them are of an oval, instead of a round form. It may be farther observed, that the inferior extremity of the falx does not reach the corpus callosum, marked K K; which shows how ill-founded is the assertion of those who have advanced, that the use of the falx was to support this corpus.

K K Vertical incision of the corpus callosum.

L Perpendicular section of the medullary triangle.

M M Oblique and narrow chink, formed by the lateral or superior ventricles.

N N Superior and anterior portion of the corpora striata.

O P Q Vertical incision of the third ventricle, also called Ventricle of the optic thalami. In O Q is the superior, and in P, the inferior portion of this ventricle.

R R R R S S Vertical incision of the optic thalami, seen exteriorly and interiorly. Their circumference is marked in R R R.

In S is a reddish spot environed with a white circle.

T T U U V Vertical incision of the crura of the brain, near the tuber annulare.

In T is a reddish spot; and in V is a semicircular trace of the black spot, or *locus niger crurum cerebri*.

W Section of the tuber annulare, the transverse fibres of which are seen.

X X Very faint filaments of an ash-coloured substance, which rises from the tuber annulare along the external border of the crura of the brain, and of the optic thalami.

Y Y Posterior cerebral artery divided.

Z Z Section of the choroid plexus which is situated along the great hippocampi.

a a Perpendicular section of the cornu ammonis, or great hippocampus; in which is seen a medullary lamina of a spiral shape, terminating in a small hook, and also a cortical substance distributed in the interior of this production.

b b b b Triangular section of the corpora striata, on which

different arches are seen, some of a cortical, and others of a medullary substance.

FIGURE IV. V. and FIG. I. of the following Table.

These three Figures represent the Internal Structure of the Optic Thalami, and the intimate origin of the nerve of the same name.

This Dissection has been made by excavating the Optic Thalami the whole length of the Nerve, and of the Optic tract itself.

The Fifth Figure, and Fig. I. of Tab. XXV. express the hollow incisions at a greater depth than the fourth.

These Figures are intended to demonstrate how the Thalami Optici contribute to the formation of the Nerves of the Second Pair.

A A The optic nerves dissected very near their entrance into the orbit.

B The junction of these nerves.

C C C The optic tract, which becomes smaller in proportion as it proceeds backward. It is along the course of this tract that a hollow section of the optic thalamus has been made, to obtain a view of the roots of the nerve with which it is connected.

D D White filaments which, from the interior of the optic thalamus, extend in a winding direction to the optic tract, which increases in size in proportion as it receives them.

E E Posterior and inferior extremity of the *Tenia semicircularis*.

F F Posterior view of the whitish and exterior portion of the thalami optici.

G The commissura mollis of the thalami optici.

H Anterior commissure.

I Anterior view of the two pillars, or columns of the medullary triangle.

K K The same two pillars viewed posteriorly.

FIGURE V.

A A B C As in the foregoing figure.

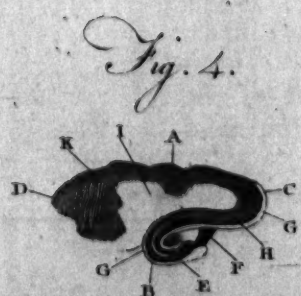
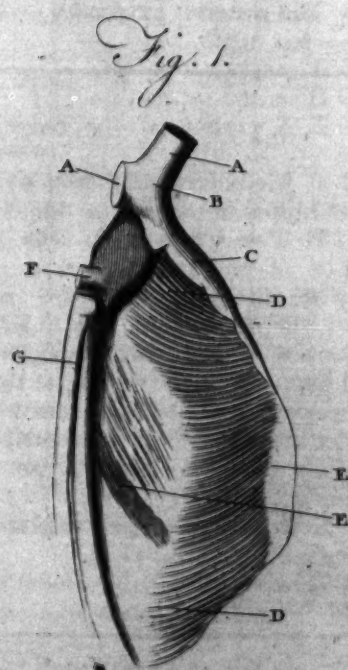
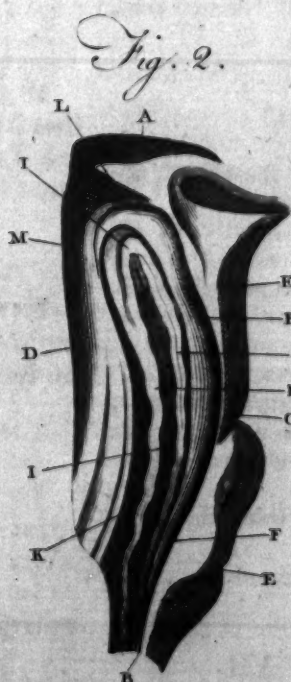
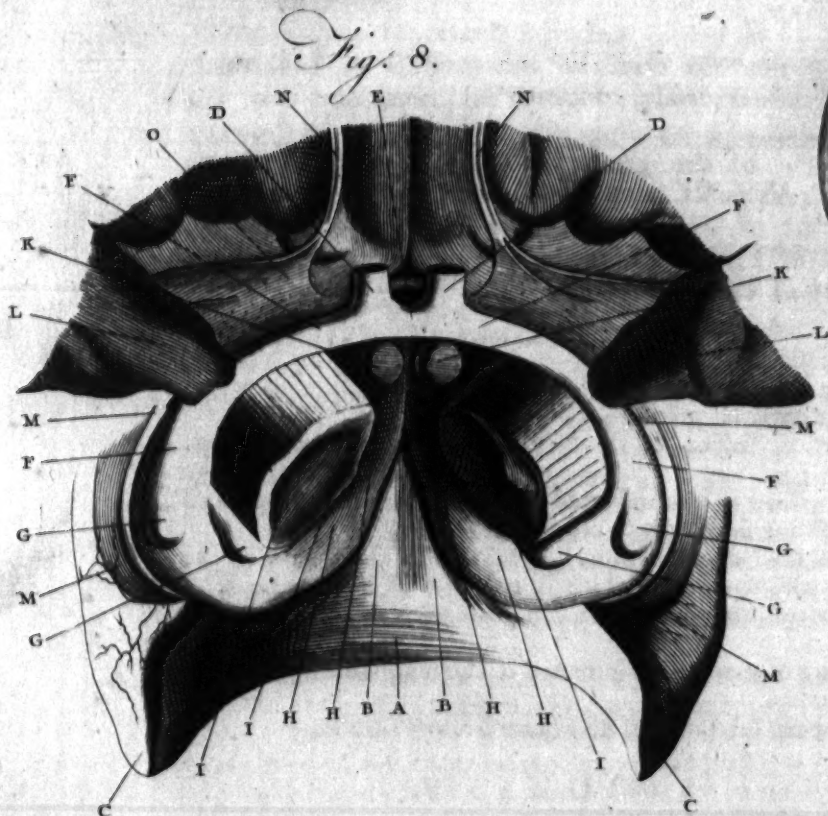
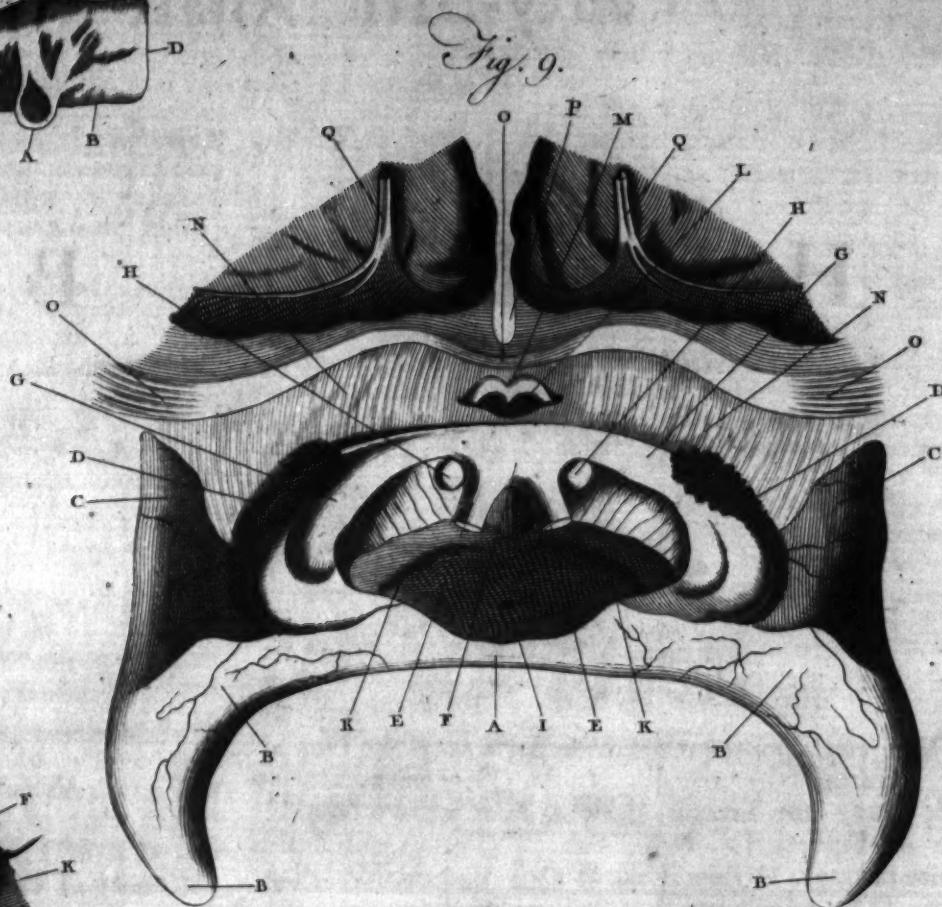
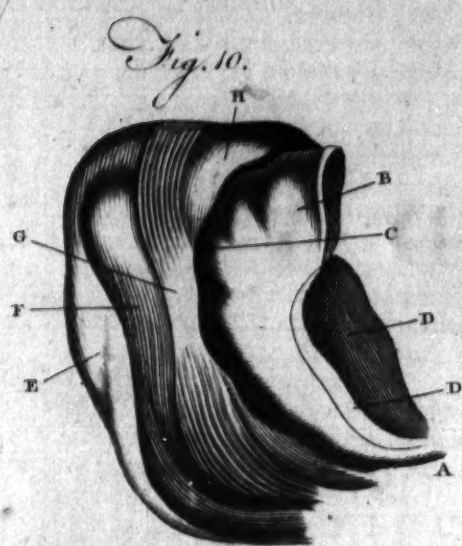
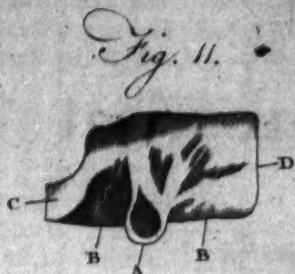
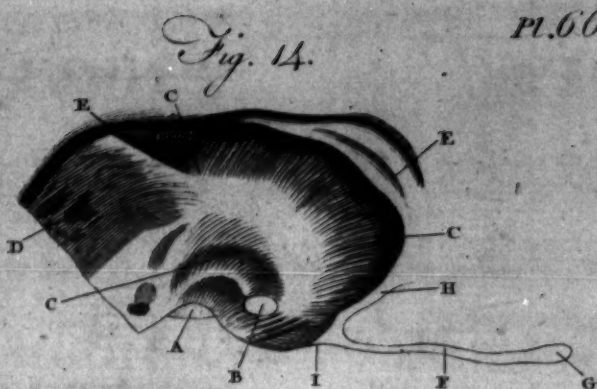
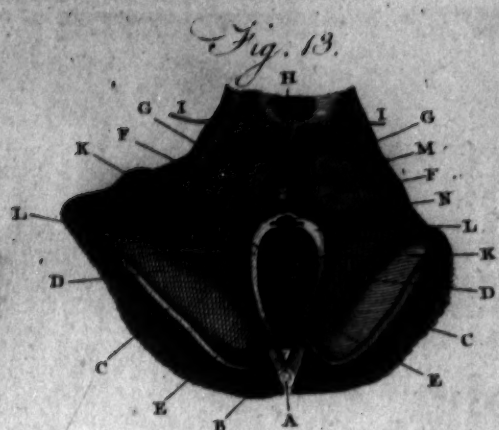
D D E E Excavation of the optic thalamus, made along the tract of the same name.

F Transverse fibres of the corpus callosum.

G Filaments which have been compared to a harp, between the posterior pillars of the vault K K K.

H As in Figure IV.

T H E



T H E

Twenty-fifth Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

FIGURE I.

THE letters point out the same parts as in the two last Figures of the preceding Table. Here the excavation made along the Tractus Opticus, is more considerable than in Figures IV. & V. Tab. XXIV. to which this Figure belongs. A view is likewise given of the Medullary Fibres D E, which run in different directions.

FIGURE II. III.

Having explained in several designs the disposition and exterior structure of the great Hippocampi, or Cornua Ammonis in their entire state, it is thought necessary to explain their interior structure by different Sections. Figures II. & III. of this Plate represent a Longitudinal Section, from top to bottom, along the great Hippocampus of the right-side. Figure II. represents the external, and Figure III. the internal portion of this production.

- A The inferior and anterior extremity: It is too large.
- B The posterior extremity, which is somewhat too elevated, and is too small.
- C The superior margin.
- D The inferior margin.
- E E A portion of the neighbouring cerebral circumvolutions.
- F F Medullary substance which forms the sheath of the great hippocampus on the side of the superior margin.
- G H Two white tracts which follow longitudinally the direction of the great hippocampus, in the interior of which they are situated. They are curved at the bottom; they become thinner towards the small, and larger towards the thick extremity of the great hippocampus; and it is in this region, and between these two tracts, that a small excavation is found. This excavation opens beneath the enlargement of the great hippocampus, and is analogous to the narrow and irregular cavities which are seen between the circumvolutions of the brain.
- I K A gray or cortical substance, situated between the tracts or medullary fibres, G H.
- L The rounded enlargement of the cornu ammonis.
- M Neighbouring cerebral circumvolutions.

FIGURES IV. V. VI. VII.

These designs are meant to represent incisions made vertically from right to left, along the great Hippocampus. The Section represented in Figure IV. has been

PART. III.

made very near the origin of this production, backward, where it is narrowest. Figure VII. represents this production, divided towards its inferior extremity in the very enlargement of the great Hippocampus. The Sections of Figures V. & VI. have been made in the intermediate space; that of Figure V. nearer the small extremity, and that of Figure VI. nearer the enlargement or thick extremity of this production.

- A The inferior,
- B The superior,
- C The internal,
- D The external margins.
- E Vertical section of the *Tenia hippocampi*, or corpus fimbriatum.
- F A portion of the indented border of the great hippocampus, consisting of a gray or cortical substance.
- G G A tract or white fibre, which forms the sheath of the great hippocampus, and which is interiorly of a spiral form.
- H Cortical substance, which composes the greater part of this production.
- I White or medullary substance of the neighbouring circumvolutions.
- K Cortical substance of the same circumvolutions.

FIGURE V.

With regard to this Figure, it need only be remarked, that the space included between E F, that is, between the *Tenia Hippocampi*, and indented border, is somewhat larger than in Figure IV.

FIGURE VI.

Here the external and internal Medullary Spiral lines are more extended than in the preceding Figures, as may be seen in E G.

FIGURE VII.

In this Vertical Section of the enlargement of the great Hippocampus, is seen the same excavation as in Figure II. & III. marked I.

In L is the oval and irregular circumference of the enlargement of the great Hippocampus.

FIGURE VIII.

This design shews the place occupied by the Crura of the Brain, the Nerves and *Tractus Optici*, the inferior part

part of the *Tania Semicircularis*, and the inferior surface of the Medullary Triangle.

A B B The inferior surface of the medullary triangle. In A are seen the transverse fibres which are the remains of the corpus callosum; and towards the middle of this surface, between B B, are the small threads resembling the cords of a lyre.

C C Part of the superior prolongations of the lateral ventricles.

D D The optic nerves.

E The union of the optic nerves.

F F F F *Tractus* opticus.

G G G G Posterior tubercles of the optic thalami.

H H H H Internal margin of the optic thalami.

I I I Circumference and section of the crura of the brain. Through the space which the crura occupy, the thalami optici are seen to extend, from whence they proceed to the annular protuberance. In I I is also seen the locus niger, of which mention has been formerly made.

K K The mammillary eminence.

L L A portion of the lateral lobes situated near the hook, or crochet of the hippocampi, which is not here seen.

M M M M Inferior portion of the striated bandelette, or *tania semicircularis*.

N N Olfactory nerves.

O The roots of the same nerves. A perforated substance is observed between the optic nerves and the external and long roots of the olfactory nerves.

FIGURE IX.

This Figure represents a Section of the Brain viewed on its Base, and prepared in such a manner as to shew the whole extent of the Commissura Anterior.

A Medullary portion belonging to the corpus callosum.

B B B B Posterior part of the lateral ventricles.

C C A fragment of the middle lobes of the brain.

D D The choroid plexus seen in the sheath of the great hippocampi, along the external margin of the *tractus* opticus.

E E The optic nerves pulled backwards, to shew the anterior pillars of the vault, or medullary triangle.

F Union of the optic nerves.

G *Tractus* opticus.

H H The mammillary eminences, which are here much farther separated from one another than in the natural state, on account of the forced position of the optic nerves.

I Section of the conduit which proceeds under the tubercula quadrigemina of the third ventricle, towards the fourth.

K K The *locus niger* of the crura of the brain.

L The choroid plexus of the third ventricle, a portion of which is here seen.

M Anterior columns or pillars of the vault, or medullary triangle.

N N A portion of the corpora striata, which are found between the commissura anterior and the *tractus* opticus.

O O O The commissura anterior, which in the middle is narrow and fibrous, and becomes gradually larger, till it is blended with the medullary substance found above the cornu ammonis.

P The commencement of the furrow which, inferiorly, separates the two anterior lobes of the brain.

Q Q Section of the olfactory nerve, cut perpendicularly from right to left.

FIGURE X.

Shews the Cornu Ammonis, or great Hippocampus of the right-side, with part of the Case which contains it, and which is opened laterally.

A B C The great hippocampus, the origin of which is found in A, the enlargement in B, and the convex margin in C.

D D *Tania hippocampi*, or corpus fimbriatum. It is situated in the concave or internal margin of the cornu ammonis.

E F G H The sheath or case of the great hippocampus opened on the side E. The concavity of this cell or case is formed, in some parts of a gray, and in others of a white substance.

Various *striae*, composed of these substances, cross one another in various directions; and in H are *laminae* of different gradations of colours.

The design of this figure is to make known the internal structure of this sheath or case of the great hippocampi.

FIGURE XI. XII.

A perpendicular and longitudinal Section of one of the Mammillary Eminences. Each of these two Figures represents one of the Proportionate Parts which result from this Section.

A The rounding of the eminentia mammillaris, the outside of which is composed of a white substance.

B B The margin which corresponds to the base of the brain.

C Section of the optic nerve.

D The posterior extremity.

FIGURE XIII.

This Figure is intended to represent a View of the small Calculi of the Pineal Gland.

A Anterior columns of the medullary triangle.

B Anterior commissure.

C C *Tania semicircularis*.

D D Thalami optici.

E E Anterior tubercles of these thalami.

F F Tubercula quadrigemina superiora.

G G Tubercula quadrigemina inferiora.

H A medullary lamina, improperly called Valve of Vieussens.

I I Nerves of the fourth pair, or pathetic.

K K Internal margins of the optic thalami, which form the third ventricle.

L L Peduncles of the pineal gland.

M The pineal gland.

The peduncles of this gland, in the place of their enlargement, frequently form a sort of small funnel, in which (or near which) is placed

N A collection of small calculi, called by Soemmerring, "*Acervulus Cerebri*."

The small calculi of the pineal gland are distributed in three different ways.

1. They are united and grouped so as to form the *Acervulus* of Soemmerring, at the base of the pineal gland, near the posterior commissure, and under the choroid plexus.

2. They are sometimes observed scattered at the sides of the pineal gland, where they form some small peculiar *acervuli*.

3. They are also frequently planted in an irregular manner, in the substance of the gland itself.

FIGURE XIV.

This design shews the Interior Structure of the Corpus Striatum, and the manner in which the Olfactory Nerve issues from it. The Section which it represents was made on the Base of the Brain, longitudinally and perpendicularly, following the direction of the Olfactory Nerve.

A Section of the *tractus* opticus.

B Section of the commissura anterior.

C C C Various rows of *striae* running in different directions.

D Section of a part of the optic thalamus, the colour of which is reddish.

E E Portion of the cavity of the lateral ventricles, which corresponds to the superior margin of the corpus striatum.

F G Olfactory nerve, the enlarged extremity of which is seen in G, and the tuber triangulare in I. It is blended in I and H, with the medullary substance with which the base of the corpora striata is encompassed. This substance penetrates into the interior of these corpora, where it appears under the form of irregular filaments, intermixed with different fibres of a gray substance. Such is one of the principal origins of the olfactory nerve.

T H E

Fig. 1.



Fig. 2.

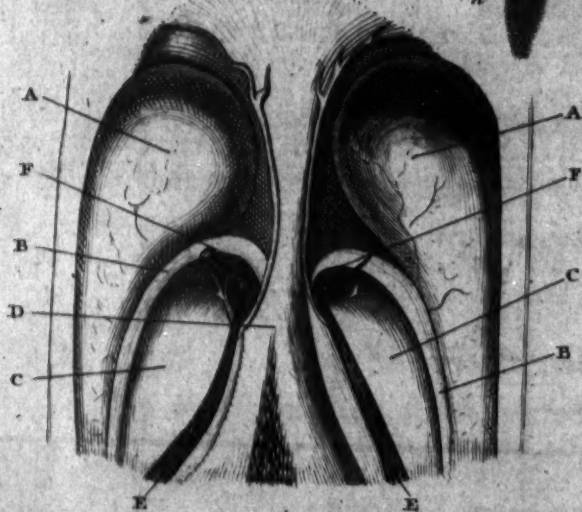


Fig. 3.

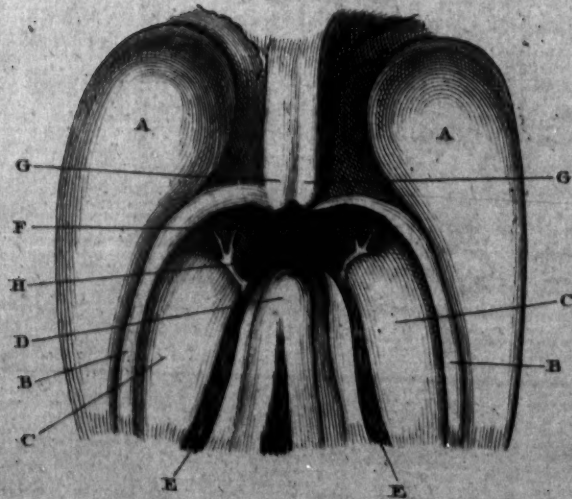


Fig. 4.

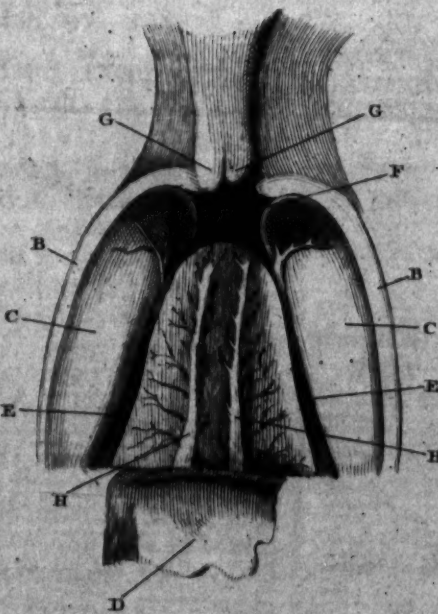
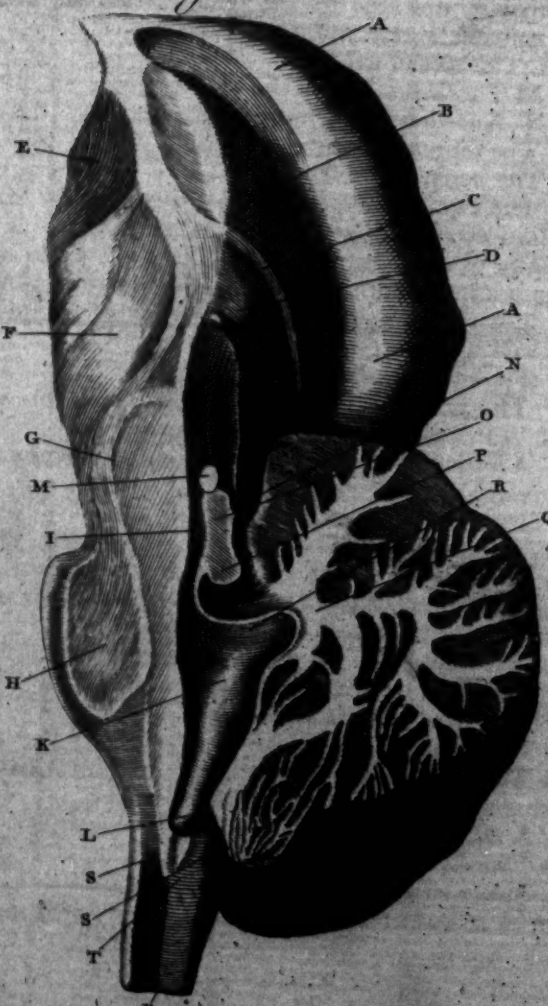


Fig. 5.



T H E

Twenty-sixth Anatomical Table

OF THE

HUMAN BODY

EXPLAINED.

FIGURE I.

THE Cranium, Brain, and Nose, cut perpendicularly, close to the right side of the Falx Cerebri, and Septum Narium.

- A A A The section of the cranium.
 B Part of the right frontal sinus.
 C Part of the right sphenoidal sinus.
 D The nasal lamella of the ethmoid bone.
 E The vomer; and F a cartilage composing the septum narium.
 G The opening from the left-side of the nose into the throat.
 H The roof of the mouth, and teeth of the left-side of the upper throat.
 I Cancelli of the cuneiform process of the occipital bone, and from it, upwards to the sella turcica K, numerous and large cancelli were continued in this subject.
 L L The root of the falx.
 M M The inner side of the left hemisphere of the brain.
 N N A section of the corpus callosum.
 O The septum lucidum.
 P The body of the fornix.
 Q The two anterior crura of the fornix.
 R A section of the commissura anterior.
 S The passage by which the lateral ventricles of the brain communicate with each other, and with the third ventricle.
 T The left-side of the third ventricle, situated under the left thalamus nervi optici.
 U The infundibulum at the bottom of the third ventricle.
 V The glandula pituitaria, lodged in the sella turcica.
 W A section of the right optic nerve.
 X A section of the right corpus albicans, behind the infundibulum.
 Y Part of the choroid plexus.
 Z The pineal gland, with two peduncles, one of which connects it to the side of the third ventricle, and the other to a which is a section of the commissura cerebri posterior.
 b The iter ad quartum ventriculum.
 c d A section of the testes and testes.
 e The Valvula Vieusseni.
 f The arbor vitæ of the cerebellum.
 g The cavity of the fourth ventricle.
 h The bottom of the fourth ventricle, shut by the vascular, or choroid plexus and pia mater.
 i A section of the tuber annulare.
 k The basilar artery.
 l A section of the medulla oblongata.
 m A section of the upper part of the spinal marrow.

FIGURES II. III. IV.

Communication of the Lateral Ventricles of the Brain with each other, and with the third Ventricle.

FIGURES II. III.

- A A A A Represents the fore-part of the corpus striatum.
 B B B B The centrum semicirculare geminum.
 C C C C The thalami nervorum optico-
 D D The body of the fornix.
 E E E E The choroid plexuses.
 F F Figure II. A crooked pin conveyed through the passage, by which the lateral ventricles communicate with each other.
 F Figure III. Shows the hole or passage, under the middle of the communication of the lateral ventricles with each other, by which the lateral ventricles communicate with the third ventricle.
 G G Figure III. The anterior crura of the fornix.
 H The union of the two choroid plexus, situated at the back-part of the passage between the two lateral ventricles.

FIGURE IV.

In this Figure the Fornix, which was represented in Figure III. cut across, is represented raised and turned backwards.

- B B The centrum semicirculare geminum.
 C C The thalami nervorum optico-
 D The under-part of the body of the fornix, which was cut across and turned back.
 E E The choroid plexuses of the two ventricles.
 F The passage by which the lateral ventricles communicate with the third.
 G G The anterior crura of the fornix.
 H H A membrane with many vessels containing red blood, which covers and conceals the third ventricle, ties together the choroid plexuses, and adheres so closely to the thalami nervorum optico-
 as to allow under it no communication of the lateral ventricles with the third ventricle. The letters H H are placed at two principal veins of this membrane, and which, farther back, unite to form a vein which terminates in the torcular Herophili, and which was observed by Galen, and has been named after him, Vena Galeni.

FIGURE

FIGURE V.

A perpendicular Section of the Corpus Striatum, Thalamus Nervi Optici, Crus Cerebri, Tuber Annulare, Pineal Gland, Commissura Cerebri Posterior, Nates, Testes, Cerebellum, and Fourth Ventricle, with the back-view of the Medulla Oblogata.

- A A The under or inner side of the corpus callosum.
- B The top of the corpus striatum.
- C The centrum semicirculare geminum.
- D The top of the thalamus nervi optici.
- E F A perpendicular section of the corpus striatum, and thalamus nervi optici.
- G A perpendicular section of the crus cerebri.
- H A perpendicular section of the tuber annulare.
- I The *Ister*, a *tertio ad quartum ventriculum*.
- K The middle of the fourth ventricle.

L The bottom of the fourth ventricle, shut by the vascular or choroid plexus.

M The section of the commissura cerebri posterior.

N The section of the pineal gland which adheres to the brain by two medullary peduncles.

O P The nates and testes.

Q The medullary part of the cerebellum, called Arbor vite.

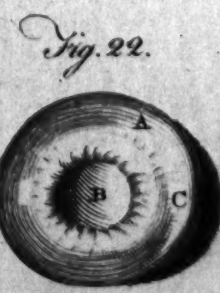
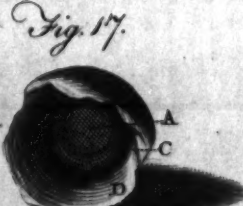
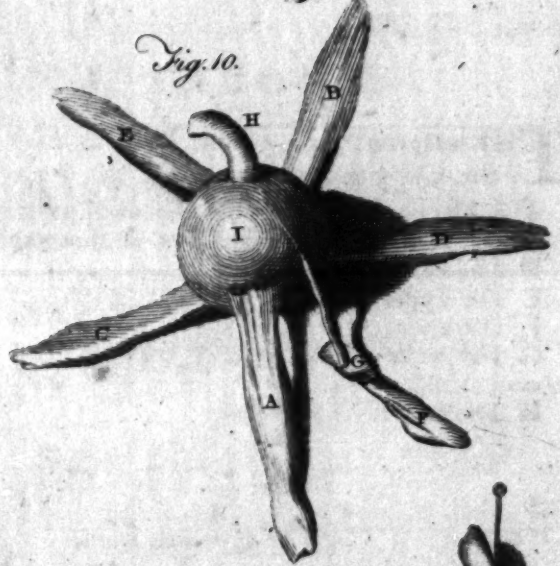
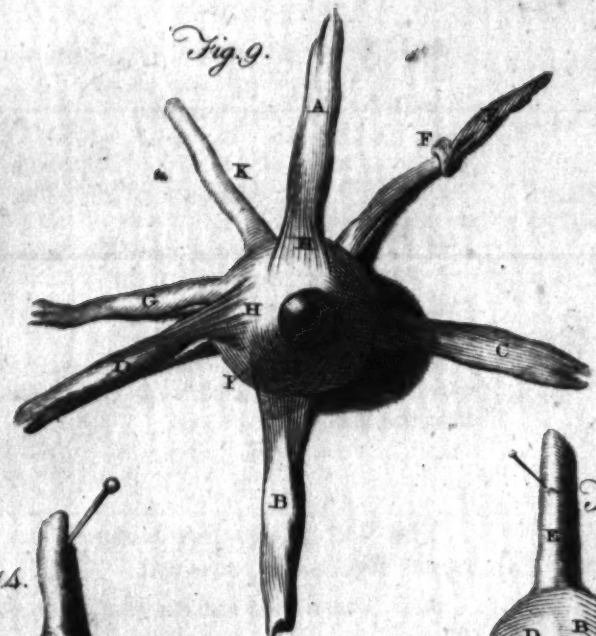
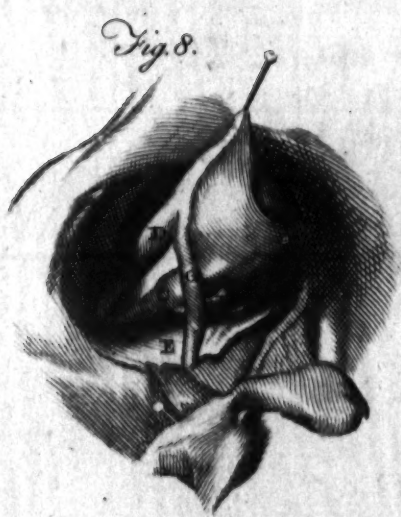
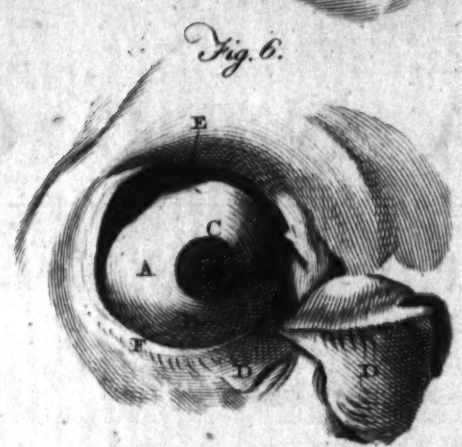
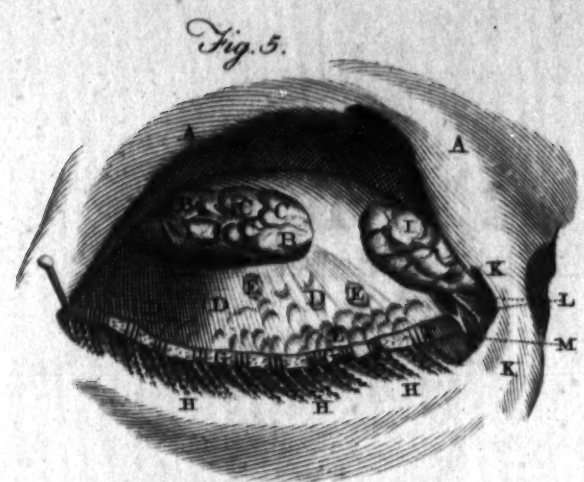
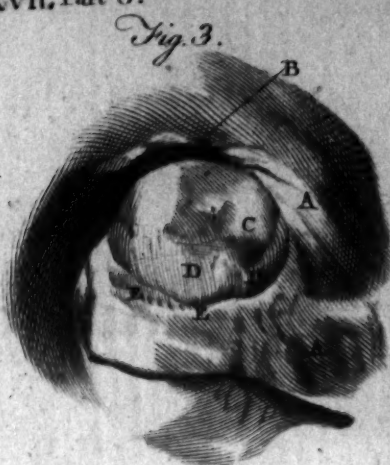
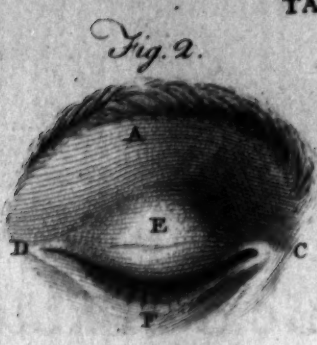
R The Valvula Vieussenii, a medullary substance covered with cineritious matter.

SS The two posterior oblong, somewhat pyramidal parts, which compose the medulla oblongata, and which are separated from each other to about the depth of a quarter of an inch, by a fissure, into which the pia mater enters.

T Transverse medullary bundles, joining the two pyramidal columns.

U The bottom of the medulla oblongata, or upper end of the spinal marrow.

THE



T H E

Twenty-seventh Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

FIGURE I.

THE external parts of the Eye, as they appear when the Eye-lids are opened.

- A B The eye-brow : B The various disposition of its hairs.
 C The canthus major of the eye, or that next the nose.
 D The canthus minor.
 E The upper eye-lid.
 F The under.
 G The white of the eye, covered with the tunica adnata, or conjunctiva.
 H The caruncula lacrymalis.

FIGURE II.

The Eye-lids shut.

- A B The eye-brow, as in the former figure.
 C The canthus major of the eye.
 D The canthus minor.
 E The upper,
 F The under eye-lid.

FIGURE III.

- A A The skin, with the orbicularis palpebrarum muscle removed.
 B The bone of the upper part of the orbit of the eye laid bare.
 C The lacrymal gland involved with fat.
 D D A faint view of the excretory ducts of the lacrymal glands.
 E E Several small glands placed between the last-mentioned ducts.

FIGURE IV.

Parts of the Muscles of the Eye-lids.

- A Part of the levator palpebræ superioris muscle, at its insertion into the upper eye-lid.
 B C A portion of the upper part of the orbicularis palpebrarum, turned down, and still adhering to the upper eye-lid.

FIGURE V.

Represents parts which are certainly not to be met with in nature. We shall, however, give the Author's description.

The Lacrymal Glands, &c. within the Orbit of the Eye, represented larger than the life.

PART. III.

- A A The upper part of the bones of the orbit.
 B B C C The lacrymal gland.
 D D D The vasa lacrymalia.
 E E E Several lacrymal glands placed between these glands.
 F F G G The cartilages of the cilia, joined together by numerous membranes, C.
 H H The hairs of the eye-lids turned upwards.
 I Part of the lacrymal gland.
 K K The bones of the nose broken off, to obtain a view of the following ducts.
 L M Ducts which convey the superfluous moisture of the vasa lacrymalia from between the eye-lids, and ball of the eye, into the foramina narium.

FIGURE VI.

The Ball of the Eye lying within the Orbit, after the upper Eye-lid is removed.

- A B The tunica adnata, placed on the fore-part of the sclerotic.
 C The iris, in the centre of which is the pupil.
 D D The under eye-lid in situ, together with the upper dissected.
 E The bone of the orbit.
 F The margin of the under eye-lid, from which the hairs grow.

FIGURE VII. VIII.

The Muscles of the Eye, as they appear within the Orbit, when cleared of the Fat and adjacent parts.

- A The attollens muscle.
 B Figure VIII. The adducens muscle.
 C The deprimens.
 D Abducens.
 E E The internal part of the bones of the orbit.
 H The tendon of the obliquus superior muscle, passing through the trochlea K, to its insertion behind the attollens muscle.
 I The external part of the bones of the orbit next the nose.
 K The trochlea, or small cartilage, on which the tendon of the obliquus superior muscle is reflected.
 X The optic nerve.

FIGURE IX.

The anterior parts of the Muscles of the Right-Eye, taken out of the Orbit, expanded, and cleared of the Fat, Membranes, Glands, &c.

L

A Attollens.

- A Attollens.
 B Deprimens.
 C Adducens.
 D Abducens.
 E The trochlearis muscle, with the trochlea.
 F The cartilage of the trochlea, expressed *in situ*, Figure VII. K.
 G The obliquus inferior muscle.
 H H H The tunica adnata, together with another membranous tegument derived from the tendons of the four straight muscles.
 I The pupil.
 K Optic nerve.

FIGURE X.

Posterior view of the Muscles of the same Eye, when taken out of the Orbit, &c.

- A The abducens muscle.
 B Adducens.
 C Obliquus inferior.
 D Attollens.
 E Deprimens.
 F Obliquus superior.
 G The cartilage of the trochlea.
 H A portion of the optic nerve.
 I The back-part of the ball of the eye, formed by the tunica sclerotica.

FIGURE XI.

The Ball of the Eye and Optic Nerve, freed from the Muscles and their common Membranes, that the proper Membranes on their surfaces may be seen.

- A Part of the tunica adnata, which is continued to the internal part of the eye-lids.
 B D The tunica sclerotica.
 C The tunica cornea covering the iris, in the centre of which is the pupil.
 E The optic nerve, covered by a continuation of the dura mater.

FIGURE XII.

- A A The sclerotic opened, to shew the tunica choroides immediately under it.
 B The tunica choroides.
 C The cornea, &c. as in the preceding figure.

FIGURE XIII.

Part of the Ligamentum Ciliare, viewed with a microscope.

- A A B B The ligamentum ciliare, consisting of two sorts of fibres, one extending through its whole breadth A A, the other terminating in the mid-way B B.

FIGURE XIV.

The Ball of the Eye, together with a portion of the Optic Nerve, where the Tunica Sclerotica and Choroides are divided, to obtain a view of the Tunica Retina.

FIGURE XV.

Part of the Optic Nerve, together with the Coats of the Eye (Figure XIX. and XX.) taken out.

- A The internal surface of the tunica retina.

FIGURE XVI.

Another view of the External and Internal Coats of the Eye, after the Humours are discharged.

- A A The tunica sclerotica.
 B The cornea.
 C Part of the optic nerve.

FIGURE XVII.

The internal and fore-part of the Coats of the Eye, the back-part of the Ball and Humours being removed.

- A The tunica cornea.
 C The inner surface of the iris, next the ligamentum ciliare.
 D The tunica retina, choroides, and sclerotica.

FIGURE XVIII.

The Inner Surface of the back-part of the last-mentioned Coats of the Eye.

- A The optic nerve cut off, in which the distribution of its blood-vessels are expressed.
 B The tunica sclerotica.
 C The tunica retina, *in situ*.

FIGURE XIX. XX.

The Vitreous and Crystalline Humours of the Eye, when taken out of the Coats.

- A The crystalline humour.
 B The impressions of the ciliary processes on the vitreous humour, and margin of the crystalline.
 C The vitreous humour.

FIGURE XXI.

- A B The crystalline humour taken out.
 A Its fore-part next the aqueous humour.
 B As it appears laterally.

FIGURE XXII.

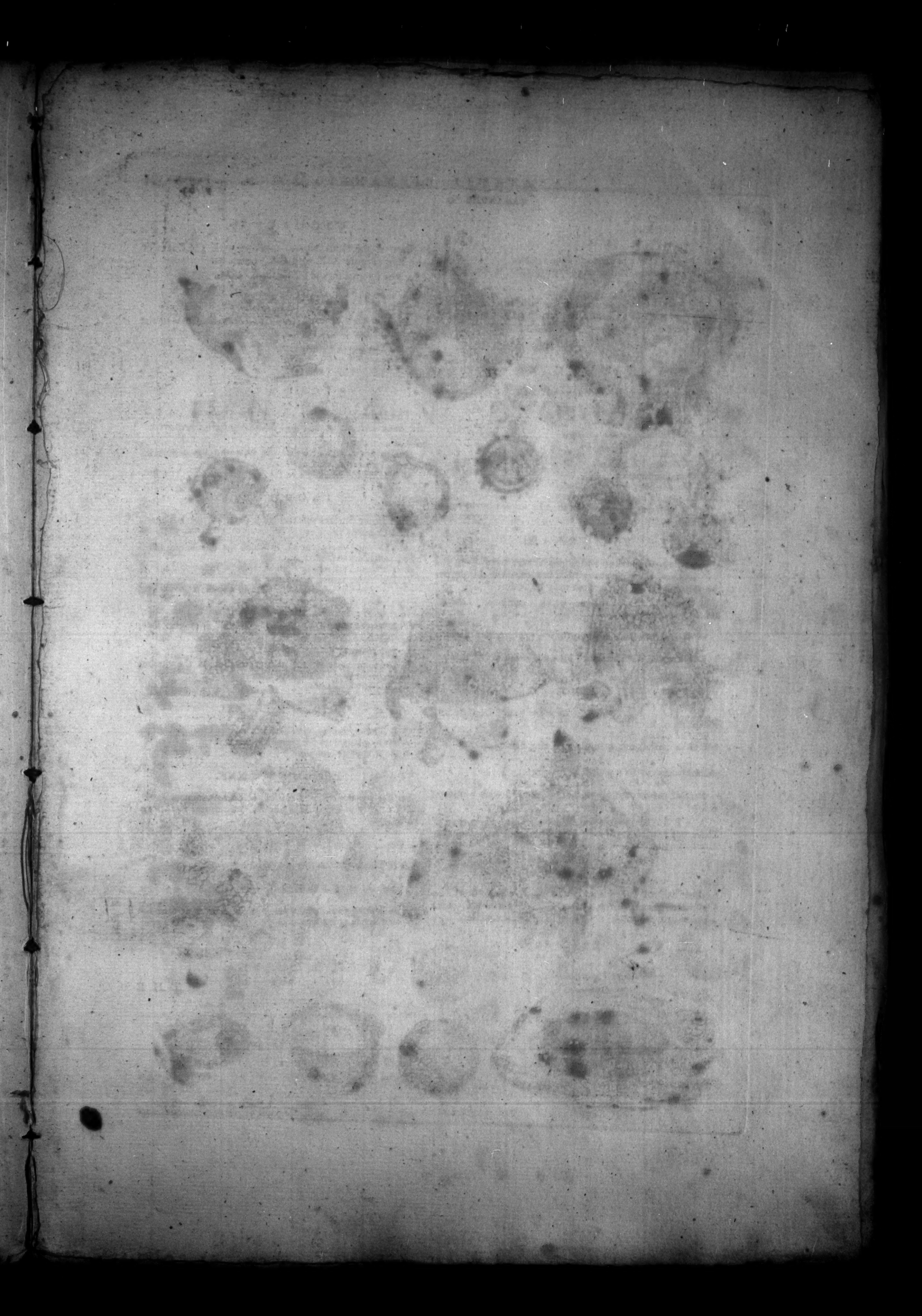
- A The anterior external part of the vitreous humour.
 B A cavity in the vitreous humour, which receives the crystalline.

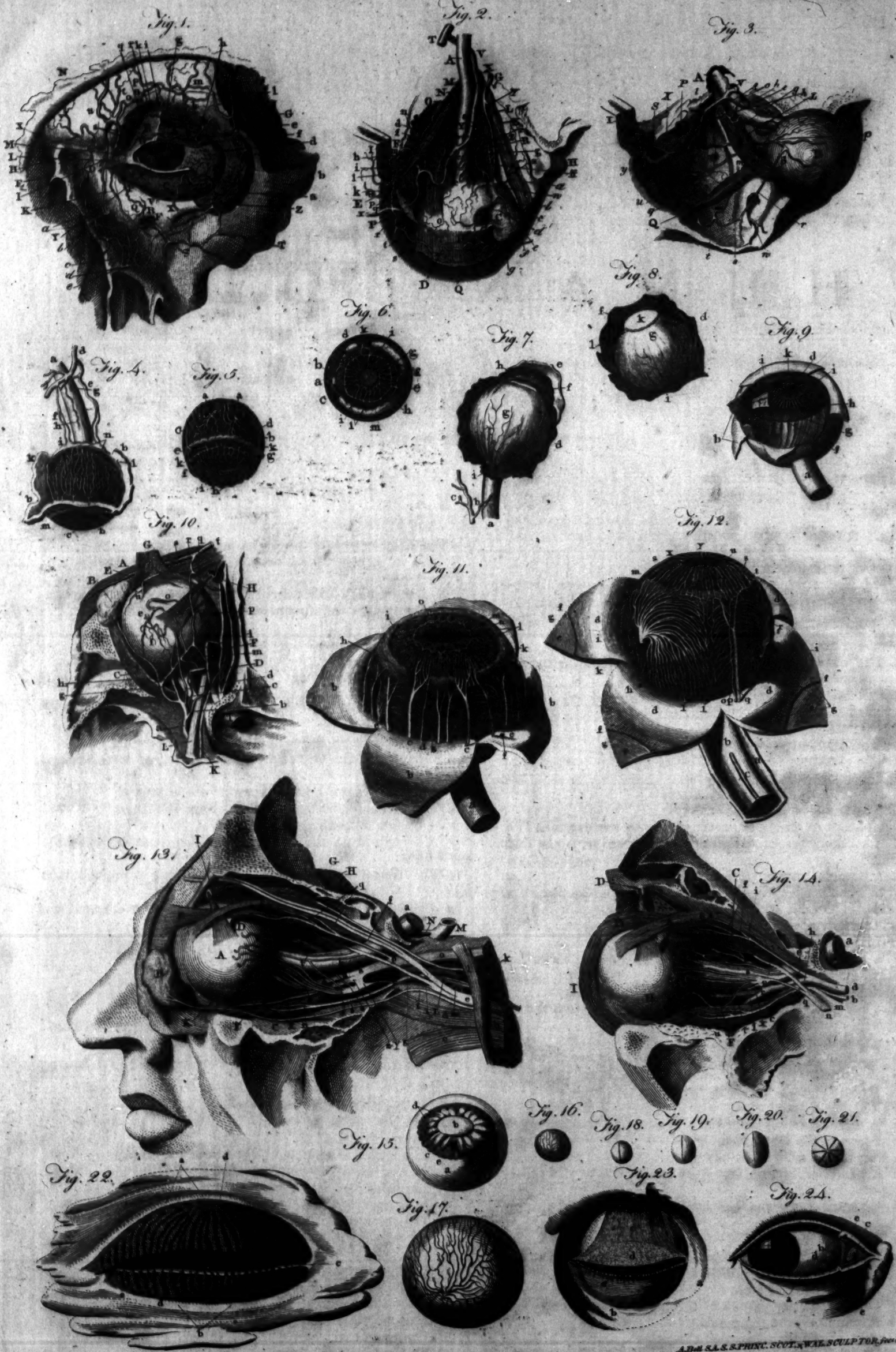
FIGURE XXIII.

- A B The crystalline humour dried.

FIGURE XXIV.

- A B The vitreous humour dried in like manner, leaving the supposed investing membrane only.





T H E

Twenty-eighth Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

THE EYE.

FIGURE I.

THE External Vessels of the Eye. A great part of the Orbicular Muscle is removed; the Nose and its Vessels not very accurately added, as they do not belong to this place.

A The ciliaris superior muscle, which belongs to the orbicularis palpebrarum.

B Part of the upper eye-lid, from which that ciliary muscle is dissected.

C The ciliaris inferior muscle.

D The ligament of the eye-lids.

E The extremity of the nasal bone.

F The foramen infra-orbitarium.

G A branch of the temporal artery.

H The trunk of the ocular artery.

I A branch of the ocular artery going to the eye-lids.

K Its cutaneous branch forming an arch with the infra-orbital.

L A branch running to the under eye-lid.

M A branch from the upper palpebral to the joining of the eye-lids.

N The superciliary branch of the ocular artery.

O The upper tarsal arch.

P A branch emerging from the infra-orbital to the lower tarsal arch.

Q A branch from the infra-orbital to the same arch.

R The trunk of the infra-orbital, passing through the foramen infra-orbitarium.

S The descending branch.

T Its continuation forming the transverse artery of the face.

V A branch from the infra-orbital to the lower tarsus.

X Its small trunk cut off at the orbicularis muscle.

Y The lower tarsal arch.

Z A mixed branch from the temporal and transverse artery of the face to the lower tarsal arch.

a Part of the orbicularis beyond the orbit.

b An inferior branch from the temporal artery to the eye-lids.

c A branch from the lacrymal artery to the inferior tarsal arch.

d A branch from the same to the superior tarsal arch.

e The upper branch from the temporal artery to the eye-lids.

f A branch to the conjunctiva.

g The upper tarsal arch.

h The superciliary branch of the supra-orbital artery, joined with a branch of the temporal.

h i An anastomosis between the palpebral artery h, and the superciliary n.

i The deep branch of the supra-orbital artery.

k The superficial supra-orbital branch joined with the temporal.

l A deep branch arising from the temporal artery, joined in the eye-brow with the upper branch of the ocular artery.

m The superficial branch of the temporal artery.

n Its anastomosis, with a twig of the ocular artery.

o Another branch of the supra-orbital artery, passing through the foramen of that name.

p The deep frontal branch of the supra-orbital artery.

q Another branch of the ocular artery, to the orbicularis muscle.

r A ligament completing the foramen supra-orbitale.

s Branches of the ocular artery to the tendon of the trochlearis muscle.

t The deep frontal branch from the ocular artery.

u The subcutaneous frontal branch from the same.

x A branch descending from the nasal artery.

y A branch from the nasal artery to the space between the eye-brows.

z The second external branch descending from the nasal artery.

a The origin of a branch going to the inside of the nostrils.

b An anastomosis, with the labial artery.

c d Two other anastomoses.

e The labial artery.

FIGURE II.

The Orbit laid open by breaking off its arched roof; the Levator Palpebræ and Rectus Superior Muscles moved from their place, every thing else remaining *in situ*.

A The optic nerve a little curved as usual.

B The bare globe of the eye.

C The lacrymal gland.

D The orbicular muscle of the upper eye-lid.

E The pulley of the obliquus superior muscle.

F The foramen orbitarium internum anterius.

G A foramen in the fissura lacera, for the lacrymal artery.

H The thick part of the os maxilæ.

I Part of the os frontis.

K The levator palpebræ muscle laid back.

L The levator oculi muscle.

M Part of the periorbitum of the orbit.

N The trochlearis muscle.

O The adductor muscle.

P The tendon of the trochlearis muscle.

Q The upper and under eye-lid.

R The

- R The abductor muscle of the eye.
 S The depressor.
 T The internal carotid artery.
 V The ocular artery.
 X The lacrymal artery.
 Y The external ciliary artery.
 Z A branch to the levator palpebrae, and abductor muscle.
 a The central artery of the retina.
 b c Small branches cut off at the rectus superior and levator palpebrae.
 d A branch to the adductor muscle.
 e The upper ciliary artery.
 f The origin of the lower artery of the eye.
 f f Its branches to the depressor.
 g The inferior ciliary branches arising from thence.
 g Some branches of it.
 h Another branch to the adductor muscle.
 i Another.
 k The internal ciliary artery.
 l The supra-orbital artery.
 m The anterior ethmoid artery.
 n A branch to the periostrum.
 o A branch to the adductor muscle and sclerotica.
 p q Two branches to the trochlea and its tendon.
 r The common trunk of the palpebral artery.
 s The upper tarsal arch.
 t Its communication at the lower palpebral artery.
 u The superciliary branch cut off.
 x The nasal branch.
 y A branch from the lacrymal artery to the levators of the eye-lid and eye.
 z A branch to the periostrum of the orbit.
 a The perforating branch.
 b A branch to the orbicularis muscle and tunica sclerotica.
 c A branch to the lower eye-lid.
 d Another inosculated with a twig of the temporal artery.
 e Branches to the eye-brows and orbicularis muscle.
 f A branch from the temporal artery to the upper tarsal arch.

FIGURE III.

The Eye stripped of its upper Muscles, and pulled outwards, that its inferior vessels may be seen.

- A The optic nerve.
 P The posterior ethmoid cell.
 I The os frontis.
 S The anterior ethmoid cell.
 X The division of the cells.
 Q The inferior obliquus muscle.
 S The rectus inferior.
 B The tunica sclerotica.
 V The ocular artery very much distorted, that the anterior ethmoidal may keep it back to the os planum, while the extremity of the trunk is pulled outward along with the eye.
 f The lower branch of the eye.
 e The upper ciliary artery.
 L Branches to the obliquus inferior.
 m A branch to the obliquus superior.
 l The inferior internal ciliary branch.
 o The external ciliary artery.
 p A branch to the tunica sclerotica.
 q An anastomosis of the branch t, with w, a branch of the inferior artery of the eye.
 r An artery from the inferior tarsal to the nasal sac anastomotic, with
 s A branch of the infra-orbital.
 t Another branch of the same towards the nasal sac.
 u Another anastomosis of the same, with the inferior artery of the eye.
 w The trunk of the infra-orbital artery.
 y The bottom of the nasal sac laid open.

FIGURE IV.

- a The optic nerve.
 b b b The sclerotica laid open.
 c The cornea.
 d The ocular artery.
 e One of the ciliary arteries.

- f Another.
 g The central branch of the retina.
 h A branch to the dura mater of the optic nerve.
 i The ring at the insertion of that nerve.
 k One of the long ciliary arteries.
 l The other.
 m The four anterior ciliary arteries.
 n The posterior ciliary arteries, perforating the tunica sclerotica.

FIGURE V.

The Tunica Sclerotica being wholly removed, the Choroid Coat appears, and the greater part of the Ciliary Circle, with the Iris,

- a a The vorticosse veins.
 b The ciliary circle.
 c One of the long ciliary arteries.
 d Another of the same.
 e The insertion of the artery c into the ring of the iris.
 f The ring of the iris.
 g The insertion of the artery d into the ring of the iris.
 h The other half of that ring.
 i Branches to the iris.
 k The anterior ciliaries inserted into the ring of the iris.

FIGURE VI.

The Cornea being removed, the Iris is seen with its Ring, and Seat of the adjacent vessels.

- a One of the long arteries.
 b c Its two divaricated branches, inserted into the circle of the iris.
 d A small artery passing over that circle, and going into the iris.
 e The circle, or posterior part of the iris.
 f The other long artery.
 g Its branch, inserted into the ring.
 h Another of the same, inserted into the circle.
 i The ciliary circle.
 k The anterior artery, inserted into the circle.
 l Another of the same.
 m The crystalline lens.

FIGURE VII.

The Choroides removed, but in such a manner that the Ciliary Ligaments and Cornea may be preserved.

- a The optic nerve.
 b The central artery of the retina.
 c The ocular artery.
 d The choroid coat opened.
 e Part of the sclerotica.
 f The ciliary processes.
 g The retina, which is here imperfectly represented as extending to the lens.
 h Streaks formed by the ciliary processes.
 i The central artery of the retina.

FIGURE VIII.

Almost the same with the Seventh;—but the Cornea, and Ciliary Processes removed, so that the Crystalline Lens and Retina only remain.

- d f g i As in Figure VII.
 k The crystalline lens, and its anterior plain surface.
 l Streaks formed by the ciliary processes.

FIGURE IX.

The three Coats of the Eye removed on one side, that the Humours may be seen in their natural situation.

- a The optic nerve.
 b The three coats of the eye turned back.
 c The vitreous humours.
 d The crystalline lens.

e The

- e The retina lying under the vitreous humour.
- f The anterior termination of the retina, according to the author.
- g The posterior and striated part of the ciliary processes.
- h The plaits of the ciliary processes, with white radii.
- ii The place where, on each side of the lens, the white rays appear at a distance from it.
- k The pupil.

FIGURE X.

The Veins of the Eye.

- A A portion of the upper Eye-lid slightly delineated.
- B The lacrymal gland.
- C The musculus abductor.
- D The back-part of the levator muscle cut through.
- E The fore-part.
- F The posterior part of the levator palpebrae cut off.
- G The fore-part.
- H The superior oblique muscle, with the trochlea.
- I The optic nerve entering the foramen opticum.
- K The fourth pair of nerves.
- L The first branch of the fifth pair of nerves.
- a The trunk of the ophthalmic vein entering its receptacle.
- b The small posterior ethmoidal vein.
- c A small branch from the optic nerve.
- d The little upper ciliary vein.
- e Three twigs coming out of the sclerotica.
- f Small branches from the sclerotica.
- g The lower muscular branch.
- h The lacrymal branch.
- i An anastomatic branch between the lacrymal and inferior.
- k The trunk passing above the bulb.
- l A small branch from the musculus levator.
- m The interior branch.
- n A branch of the trunk, from
- o The anastomatic branch between the trunk and lacrymal branch.
- p The anterior ciliary vein.
- q The anterior ethmoidal vein.
- r A trunk going out of the orbit, communicating with
- f The superior palpebral, and with
- t The nasal vein.
- u The small anterior ciliary vein, entering the muscular branch, after perforating the sclerotica.

FIGURE XI.

The Structure of the Iris and Ciliary Nerves, the Eye being somewhat magnified.

- a The optic nerve.
- b The tunica sclerotica turned back.
- c, &c. The ciliary nerves; the largest divided anteriorly into branches.
- d Others smaller, with scarcely any branches.
- e e Two of the veins of the eye, commonly called Vasa Vorticosa, slightly delineated.
- f A hole in the sclerotica, through which the vein passes.
- g A smaller vein.
- h The ciliary circle.
- i The larger ring of the iris.
- k The serpentine parallel fibres of the iris.
- l The larger fibres joined among themselves by arches, of which a great number constitute the smaller circle of the iris.
- m The smaller anterior ring of the iris.
- n Straight fibres, stretching from the convexity of the arches to the pupil.
- o The pupil.

FIGURE XII.

Veins of the Choroides and Iris.

- a The sheath of the optic nerve cut off from the dura mater, and turned back.
- b The optic nerve.
- c The central vein emerging from the substance, and then running along the surface of the optic nerve.
- d d d The four corners of the sclerotica turned back.

PART III.

- e e e The angles of the cornea.
- fff A black circle, which distinguishes the cornea from the sclerotica.
- g g g Small holes of the sclerotica near the cornea, for the passage of the anterior ciliary arteries and veins.
- h A larger hole for the vorticosæ vein.
- ii Two other larger vorticosæ vessels, divided on each side into numerous branches.
- k Small branches going backward, of which some meet with
- ll The posterior ciliary veins perforating the sclerotica, near the insertion of the optic nerve.
- m The anterior small branches going to the iris.
- n The smaller vorticosæ vessel, less elegant.
- o The small intermediate accessory vein, joined with both the larger vorticosæ vessels, divided into many branches.
- p The long ciliary little vein.
- q The ciliary nerve, the perpetual companion of the long small vein.
- r Two small branches, into which the long ciliary vein is divided below the ciliary circle.
- ff The three small anterior ciliary veins cut off.
- tt The lateral branches, by which the small veins, passing out of the choroides into the iris, communicate with each other.
- u The small serpentine parallel veins of the iris.
- x The anterior lamella of the iris turned back.

FIGURE XIII.

The Nerves of the Bulb and Muscles of the Eye.

- A The bulb of the Eye.
- B The lacrymal gland.
- C The musculus abductor.
- D The levator muscle.
- E The levator palpebrae.
- F The depressor Muscle.
- G The adductor muscle.
- H The obliquus superior.
- I The trochlea.
- K Part of the superior oblique muscle.
- L The course of the carotid in its receptacle.
- M The carotid penetrating into the cavity of the skull.
- N The ocular artery derived from the carotid.
- a The optic nerve passing through its hole.
- b The fifth pair of nerves in the cavity of the skull.
- c The third branch of the fifth pair of nerves.
- d The second branch of the same.
- e The first branch.
- f The frontal branch of the first branch e, again divided into two.
- g The nasal branch of the first branch e.
- h h Small ciliary branches of the branch g, proceeding above the nerve.
- i The lacrymal branch of the branch e.
- k The fifth pair of nerves.
- l The sixth pair of nerves, double in its receptacle.
- m The double root of the intercostal nerve, from the sixth pair.
- n The insertion of the sixth pair into the adducens muscle.
- o The trunk of the third pair of nerves.
- p The upper and smaller branch of the third pair.
- q Small branches of the branch p, to the attollens muscle.
- r A small branch of the branch p, to the levator palpebrae.
- f The inferior and larger branch of the third pair of nerves.
- t A branch of the branch f, to the adducens muscle.
- u A branch of the branch f, to the depressens muscle.
- x A branch of the branch f, to the obliquus inferior.
- y The ophthalmic ganglion, loosed from its connection with the optic nerve, and turned outward, that the division of the third pair of nerves may appear.
- z The shorter root of the ophthalmic ganglion, from the nerve of the obliquus inferior.
- 1. The longer root of the ganglion, from the nasal branch of the fifth pair.
- 2. The upper bundle of ciliary nerves, formed by four little nerves in this place.
- 3. The lower bundle.
- 4. A small branch of the lower bundle a little to the outside of the rest.

M

5. A

5. A small branch to each twig, derived from the nasal nerve, inserted at the outside of the optic nerve, ascending below the upper bundle.
6. The lower interior ciliary nerve of the lower bundle.

FIGURE XIV.

The Ophthalmic Ganglion, with the Small Ciliary Nerves.

- A The attollens muscle turned a little round, that its lower surface, in which the nerve is inserted, may appear.
B The levator palpebræ.
C The fleshy portion of the trochlearis.
D The tendon of the trochlearis, with the trochlea.
E A portion of the musculus adducens, with a branch of the third pair of nerves.
F A portion of the deprimens, with a nervous branch inserted into it.
G The abducens muscle seen on its internal surface.
H The insertion of the obliquus inferior.
I A portion of the upper eye-lid slightly delineated.
a The optic nerve.
b The fourth pair of nerves cut off.
c The sixth pair of nerves inserted into its muscle.
d The third pair of nerves.
e The upper branch.
ff Twigs of the branch e, to the attollens muscle.
g A branch of the branch e, to the levator palpebræ.
h The lower branch of the third pair of nerves.
i A branch to the deprimens.
k A branch to the adducens muscle, both slightly delineated.
l A branch to the obliquus superior muscle.
m The frontal branch of the fifth pair of nerves cut off.
n The frontal branch of the same.
oo Two small ciliary nerves derived from the nasal.
p The ophthalmic ganglion, annexed to the exterior side of the optic nerve.
q The longer root, from the nasal branch of the fifth pair.
r The shorter root, from the nerve l, of the oblique inferior muscle.
f The upper bundle of small ciliary nerves, composed of three small nerves.
t The lower and larger bundle.
u A Twig always bent outwards, and passing by a long circuit to the bulb.
x The lower and inner branch of this bundle, inserted into each branch derived from the nasal.

FIGURE XV.

The Membranula Coronæ Ciliaris, by the assistance of which the Crystalline Lens is joined with the Vitreous humour, and the Canal of Petit inflated.

- A The vitreous humour.
b The crystalline lens.
c A serrated ring composed of a black pigment, laid upon the anterior part of the vitreous humour and corona ciliaris.

- dd Small vesicles, in which the membranula coronæ ciliaris is elevated by air blown into it.
e A small perforation by which the air was introduced.

FIGURE XVI. XVII.

An Artery of the Crystalline Lens conspicuous in its Posterior Surface.

Figure I. Of its natural size.

Figure II. Magnified by a microscope.

FIGURE XVIII. XIX. XX.

Three Figures of the Crystalline Lens, from subjects of different ages.

Figure 18. From a child newly born.

Figure 19. From a child of some years, and

Figure 20. From a grown up person of about twenty years of age, by which it appears, that the younger the person is, the more convex is the lens.

FIGURE XXI.

The Crystalline Lens, which, when macerated in Water, begins to split into Triangular Scales.

FIGURE XXII.

The Glandulæ Sebaceæ Meibomianæ, seen from the Posterior Surface of the Eye-lids.

- a The tarsus of the upper eye-lid.
b The tarsus of the lower eye-lid.
c The inner canthus.
dd Glandular plexus which are commonly called Meibomian, or Sebaceous glands.
e e The orifices of these plexuses, in the edge of the eye-lids.

FIGURE XXIII.

The insertion of the Levator Palpebræ Superioris.

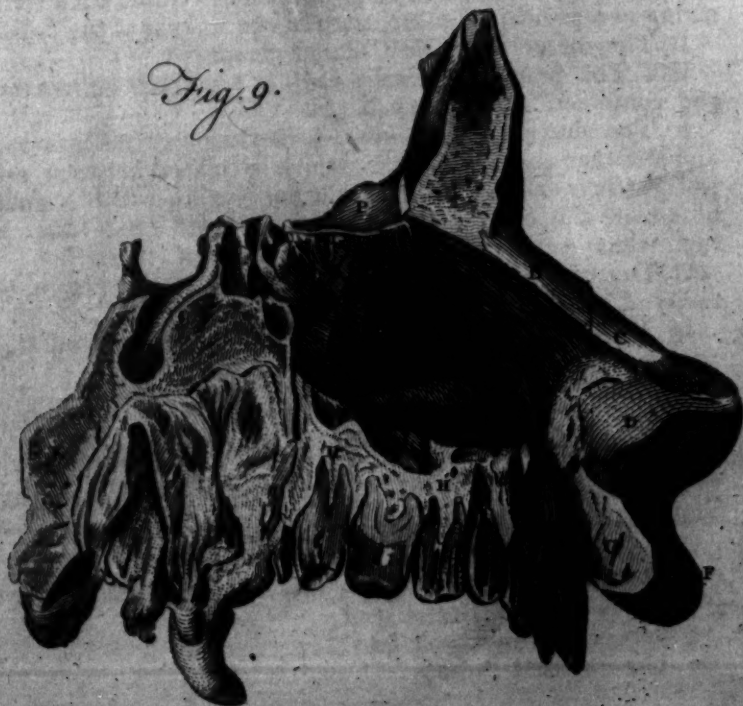
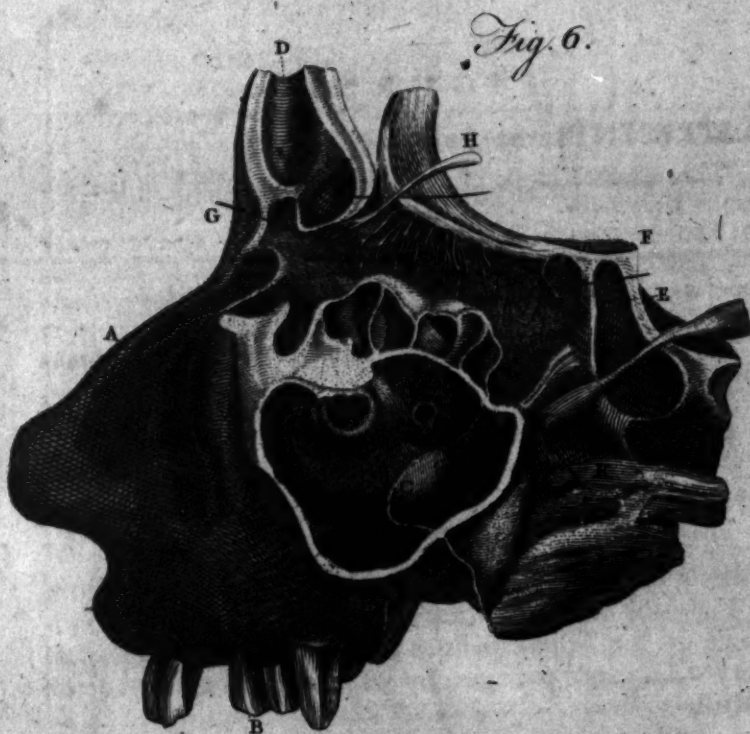
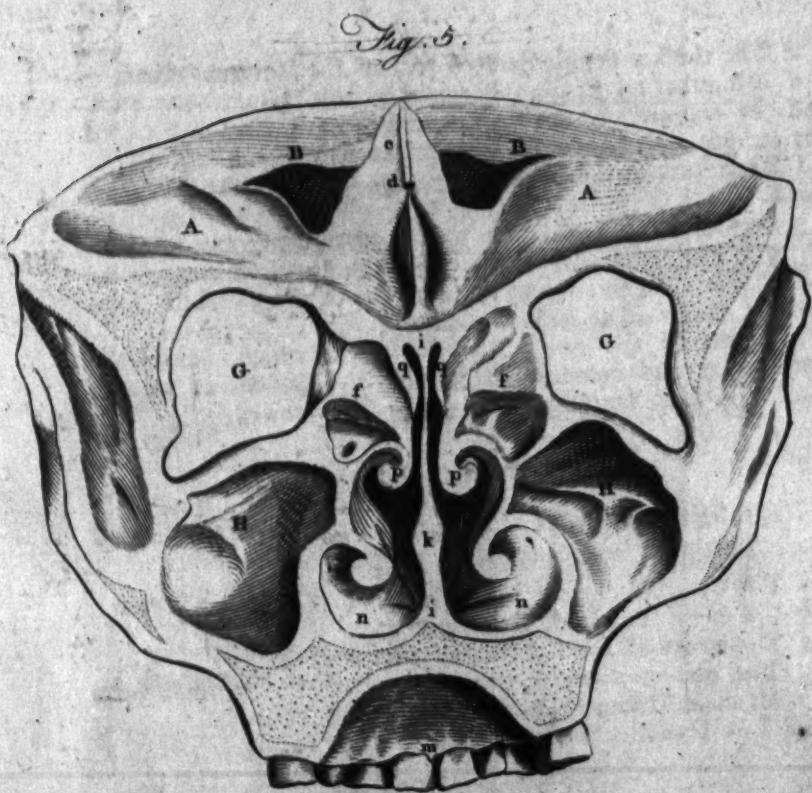
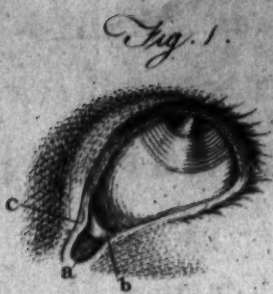
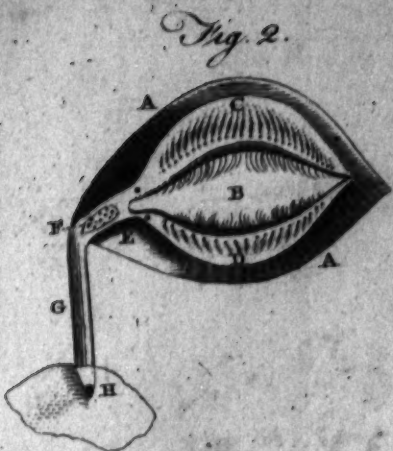
- a The internal canthus of the eye.
b The lower eye-lid.
c The aponeurosis of the levator muscle of the eye-lid.
d The Meibomian glands, seen through the aponeurosis.

FIGURE XXIV.

The Passages of the Tears.

- a The orifices of the sebaceous glands.
b The membrana semi-lunaris before the lacrymal caruncle.
c The caruncula lacrymalis.
d The puncta lacrymalis.
e e The two lacrymal ducts, near the nasal sac, joined together.
f The lacrymal sac.

THE



T H E

Twenty-Ninth Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

FIGURE I.

REPRESENTS the Left Eye.

a The internal angle of the palpebræ, in which is the caruncula lacrymalis.

b The membrana semi-lunaris of a reddish colour, partly seen, together with the caruncula, and margins of the palpebræ, as much of them as this natural position of the eye-lids admits: This membrane, though it corresponds neither in use nor size, answers in its situation to that of the membrana nictitans of Brutes.

c That portion of the margin of the upper eye-lid in which the prominence is situated, in the extremity of which prominence is the punctum lacrymale.

FIGURE II.

Shews the Palpebræ of the Right Eye, viewed from the Posterior or Interior part, and the Glandulæ Meibomianæ of the same, besides the Caruncula, and Puncta Lacrymalia, and passages by which these reach to the Nostrils.

A A The interior coat of the palpebræ.

B The cilia.

C The upper tarsus, with its sebaceous glands, each terminating in a peculiar small foramen at the margin of the eye-lid.

D The under tarsus with similar glands.

E E The puncta lacrymalia, each in a peculiar prominence, and continued into their passages.

F The ductus major, into which these two passages run; and also that oblong tubercle, which is placed between each passage: It is called the Caruncula Lacrymalis, which is pulled backward and outward, and is covered with small tubercles, from which very fine and short hairs stick out.

G The continuation of the same ductus major open in the cavity of the nose,

H A small portion of the coat of which is left around it.

FIGURE III.

Represents the Upper Eye-lid of the Right Side, with the Glandula Innominata GALENI, or Lacrymal Gland.

a The inner side of the upper eye-lid.

p The two puncta lacrymalia, into which the different ends of a bit of wire are introduced.

b Part of the under eye-lid.

c The external canthus.

d The thicker conglomerated part of the lacrymal gland.

e A number of smaller lacrymal glands, lying between d, and the conjunctiva, which, for distinction's sake, are called (by our author), Glandulæ Lacrymales congregatæ.

f Four bristles introduced into the ducts of the lacrymal gland.

g One of these ducts, into which quicksilver was injected, which is hid where it passes between the glandulæ congregatæ e, but appears again, where it comes out of the glandula innominata, composed of three branches.

h A part of the tunica conjunctiva, at which, before the preparation was immersed in spirits, the orifices of two or three very small lacrymal ducts could be perceived.

FIGURE IV.

Represents the Like Parts on the Left Side, viewed from the upper and outer side.

a The outer side of the tunica conjunctiva of the left eye.

b c d d e e The same as in figure 3.

f The artery of the lacrymal gland injected.

g The end of a bristle put into one of the lacrymal ducts h, after the duct had been injected with quicksilver.

i i Two branches joining to compose the duct h.

FIGURE V.

Shews an Anterior Section of the Head, dissected almost perpendicularly from the Base of the Cranium, to the first Dentes Molares.

A A Part of the os frontis forming the anterior base of the cranium.

B B The frontal sinuses, very large, open on both sides.

c The process of the same bone, rising like a spine along the middle of its internal surface.

d The foramen situated in the interval lying between this process, and Crista Galli: Though this foramen was of a circular figure, yet as it is here viewed obliquely, it appears elliptical.

e The process of the os ethmoides, frequently called Crista Galli.

f f The ethmoid sinuses.

G G The orbits.

H H The maxillary sinuses.

i i The septum nasi.

k The thickest part of the same septum.

l l The right and left cavity of the nose, with a bristle in each, pointing out, rather than giving a distinct view of the foramina Stenonis into which they are fixed.

m A place in the anterior region of the palate, to which there is a passage from these foramina Stenonis.

Some

Some way above n n, at the outer side of the ossa turbinata inferiora, are seen the orifices of each of the large lacrymal ducts.

- o o The ossa turbinata inferiora.
- p p Ossa turbinata superiora.
- q q Ossa turbinata suprema, or minima.

FIGURE VI.

Represents the distribution of the Branches of the First, or Olfactory Pair of Nerves, and of the Nasal Branch of the Fifth Pair, upon the Membrane of the Nose.

- A The ridge of the nose.
- B The teeth of the left side.
- C The left antrum maxillare cut open.
- D The left frontal sinus cut open.
- E The left sphenoidal sinus cut open.
- F G The ends of a bristle passed between the membrane which lines the left side of the nose, above the upper part of the os spongiosum superius, (from which the bone has been cut off), and the branches of the first pair, or olfactory nerves. These branches join and separate again repeatedly, forming a very elegant net-work on the outside of the membrane, or between it and the bones.
- H Represents the nasal branch of the first branch of the fifth pair of nerves, ending partly in the septum narium, and partly in the membrane which lines the outer side of the nose.
- I The nasal branch of the second branch of the fifth pair of nerves.
- K Its division into branches, which are dispersed on the membrane which lines the outer side of the nose.

FIGURE VII.

This Figure represents a principal part of the Nasal Branch of the First Branch of the Fifth Pair, ending on the Septum Narium.

FIGURE VIII.

The Olfactory, or First Pair of Nerves, as they are seen upon the Membrane of the Septum Narium.

The Bony Septum is removed to expose the Nerves of the right Nostril, as they pass at first between the Membrane and Bone.

- A The os frontis.
- B The frontal sinus.
- C The cartilaginous part of the septum narium.
- **** The cut edge from which the septum has been separated all around.
- D The surface of the common skin, where it is lost in the membrane of the nose.
- E The upper lip.

F Part of the alveolar process of the maxillary bone next the symphysis.

- G The roof of the mouth.
- H The bony palate.
- I The uvula, and palatum molle.
- K The upper part of the fauces.
- L The opening of the eustachian tube.
- M The cupeiform process of the os occipitis.
- N The inside of the cuneiform process, near the foramen magnum occipitale.
- O The posterior clinoid process.
- P The sphenoid sinus, with its septum.
- Q The sella turcica.
- R The crista galli.
- S S The membrane of the right nostril, which lined the septum; the septum being removed.
- T A branch of the fifth pair of nerves, which comes through the foramen commune, sphenopalatinum.
- U U U The first pair of nerves, having passed through the cribriform plate of the ethmoid bone, ramifying on the membrane of the septum.

FIGURE IX.

The Olfactory, or first pair of Nerves, as they are seen upon the membranes of the nose, which covers the turbinated bones;—the exterior part of the Face being removed.

This engraving was taken from the same head as Figure VIII.

- A The os frontis.
- B The os nasi.
- C The cartilaginous and membranous part of the nose.
- D The ala nasi, with the skin left on.
- E The septum narium.
- F The upper lip.
- G Section of the upper lip.
- H H H The alveolar process of the superior maxillary bone.
- I Part of the antrum.
- K The os occipitis.
- L The body of the sphenoid bone.
- M The groove made by the carotid artery.
- N The posterior clinoid process.
- O The sphenoid sinus.
- P The crista galli.
- Q The membrane of the nose.
- R The membrane a little more convex, where the inferior turbinated bone is situated.
- S The same, where the superior turbinated bone is situated.
- T The branch of the fifth pair of nerves, which was supposed to be lost on the membrane of the nose.
- U U U The trunk of the first pair of nerves, which is afterwards lost upon that part of Snider's membrane which covers the turbinated bones.



T H E

Thirtieth Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

FIGURE I.

THE Right Portion of the Base of the Head, divided from the Septum Narium, by a perpendicular Section, proceeding in a straight direction from before, backward.

A Part of the os frontis, which is in the space between the eye-brows.

a A great deal of diploe there.

b The lamina which separates the diploe from the frontal sinus.

c The anterior thick lamina of the os frontis.

d The posterior thin lamina, called *Vitreæ*.

e Suture dividing the os frontis from the os maxillare superius.

B The part of the superior maxillary bone called the Nasal process.

C The interior part of the same bone, which forms the middle passage of the nostrils, painted with vessels, which arise from those of the os spongiosum inferius.

D Part of the same bone, which forms the origin of the lower passage of the nostrils.

E The alveolar part.

f The diploe of this part.

F Dens incisivus. The other teeth are the dens caninus and dentes molares.

G Descending or alveolar part of the osseous palate.

H The upper part of the palate or cælum.

I The uncus of the os sphenoides.

K The ala pterygoidea interna.

L The tube, with some part of the membrane which surrounds the fauces preserved.

M The spinous process of the os multiforme.

N Part of the os temporum forming the anterior wall of the meatus auditorius.

O O O Part of the os occipitis.

P The mammillary process of the os temporum.

Q Some part of the os occipitis, in the cavity of the cranium.

R Section of the cuneiform process, into which the os occipitis and multiforme run.

S Posterior process of the fella equina.

T Right part of the anterior processes of the same.

V The whole right sphenoid sinus opened.

g One half of the orifice, by which it opens into the posterior and upper passage of the nostrils.

X That part of the os sphenoides which shuts up the sinus above, and below hangs over the back-part of the fauces.

Y A portion of the os cribrosum, which completes the ethmoid cells.

PART III.

Z The adjacent portion of the os frontis.

h The wall of the ethmoidal cell, principally of the anterior, entire.

i The lower part of the right frontal sinus.

k A portion of the left frontal sinus.

l The first free or open part of the ethmoid cell.

m The wall by which it is separated from the second.

n The second ethmoid cell divided at the middle, by

o A half-partition.

p The third ethmoid cell.

q The partition by which it is separated from the second.

r Part of the os cribrosum, which completes the third cell below.

s The process of the os ethmoides.

t The excretory orifice of the third ethmoid cell.

u The last and upper passage of the nostrils.

x The mouth of the ethmoid cell, of an unusual appearance.

y The nasal vessels in that foramen through which they pass from the sphenomaxillary fissure to the nostrils.

z Part of the os cuneiforme.

1. The upper, inner, and entire part of the os spongiosum superius.

2. Part of the same bone resembling the shell of a snail.

3. Its anterior obtuse, and

4. Posterior acute extremity.

5. The middle passage of the nostrils.

6. The lamina descendens of the os spongiosum superius.

7. A part before it, by which the membrane of the maxillary sinus is completed,

8. And the posterior part, also membranous.

9. Part of the palate bone, which shuts up that sinus.

10. Os spongiosum inferius.

11. The anterior extremity.

12. The posterior extremity.

13. The seat of the opening of the lacrymal duct.

14. The lowest passage of the nostrils.

FIGURE II.

The Anterior part of the Bones of the Head, which is taken off by one longitudinal Section by which it is separated from the Septum, and by another Transverse Section by which it is separated from the Posterior part. The two surfaces of this Figure are delineated. The inner belongs to the internal part of the Nostrils, and agrees with the Anterior part of the former Figure, excepting that the Pituitary Membrane is wholly preserved.

N

A The

- A The anterior lamina of the os frontis.
 B The posterior.
 C The frontal sinus.
 D The orifice of the frontal sinus by which it opens into the first ethmoid cell.
 E E The first ethmoid cell.
 F Part of its internal wall, (fig. I. h).
 G The nasal process of the upper maxillary bone.
 H A section of the os spongiosum.
 I The wall of the middle passage of the nostrils, by which it is separated from the superior appendix of the maxillary process.
 K That appendix which is continued to V, with the maxillary sinus.
 L M The internal wall of the orbit. Part of it, as far as L, belongs to the os ethmoides,
 M Part to the upper maxillary bone.
 N An osseous wall terminating the appendix of the maxillary sinus.
 O O O Cells in the thickness of the upper maxillary bone and its orbital part, not yet described. The uppermost of these opens into the anterior or first ethmoid cell.
 P A section of the orbit.
 Q Part of the orbit belonging to the os frontis.
 R Part belonging to the os malæ.
 S The outside of the maxillary sinus.
 T The cavity of the maxillary sinus.
 V The foramen by which it is continued, with its appendix.
 X The osseous bridge by which this appendix is separated from the maxillary sinus, but so as to communicate with the cavity.
 Y A section of the os spongiosum inferius.
 Z The partition by which the maxillary sinus is separated from the cavity of the nostrils.
 a The orifice of the lacrymal duct.
 b The lowest passage of the nostrils.
 c The middle.
 d The thickness of the upper jaw-bone.
 e Part of the palate.
 f The lateral dens incisivus.
 g Dens caninus.
 h h The two anterior molares.

FIGURE III.

The Posterior and larger part of the left half of the Bones of the Head, of which there are also two surfaces, the Anterior and Internal. The one is adapted to and corresponds with the Posterior part of the former Figure; the other completes the cavity of the Nostrils.

The Anterior Structure.

- A Part of the os frontis.
 B B Part of the os maxillare inferius.
 C Part of the os malæ.
 D Part of the os multiforme.
 E The inferior orbital fissure.
 F F F The three dentes molares postici.
 G The sinus Highmori opened.
 H The partition by which it is separated from the nostril.
 I The wall between the appendix of the maxillary sinus and nostril.
 K The appendix of the maxillary sinus. (fig. II. I K.)
 L L L The orbital cells, (fig. II. O O.)
 M Their communication with the first ethmoidal cell.
 N The partition between the first and second cells of the os ethmoides.
 O The wall of the orbit.

- P The partition between the orbital cells and the appendix of the sinus Highmori.
 Q A section of the os spongiosum superius,
 R And of the os spongiosum inferius.

The Internal Surface of this Figure.

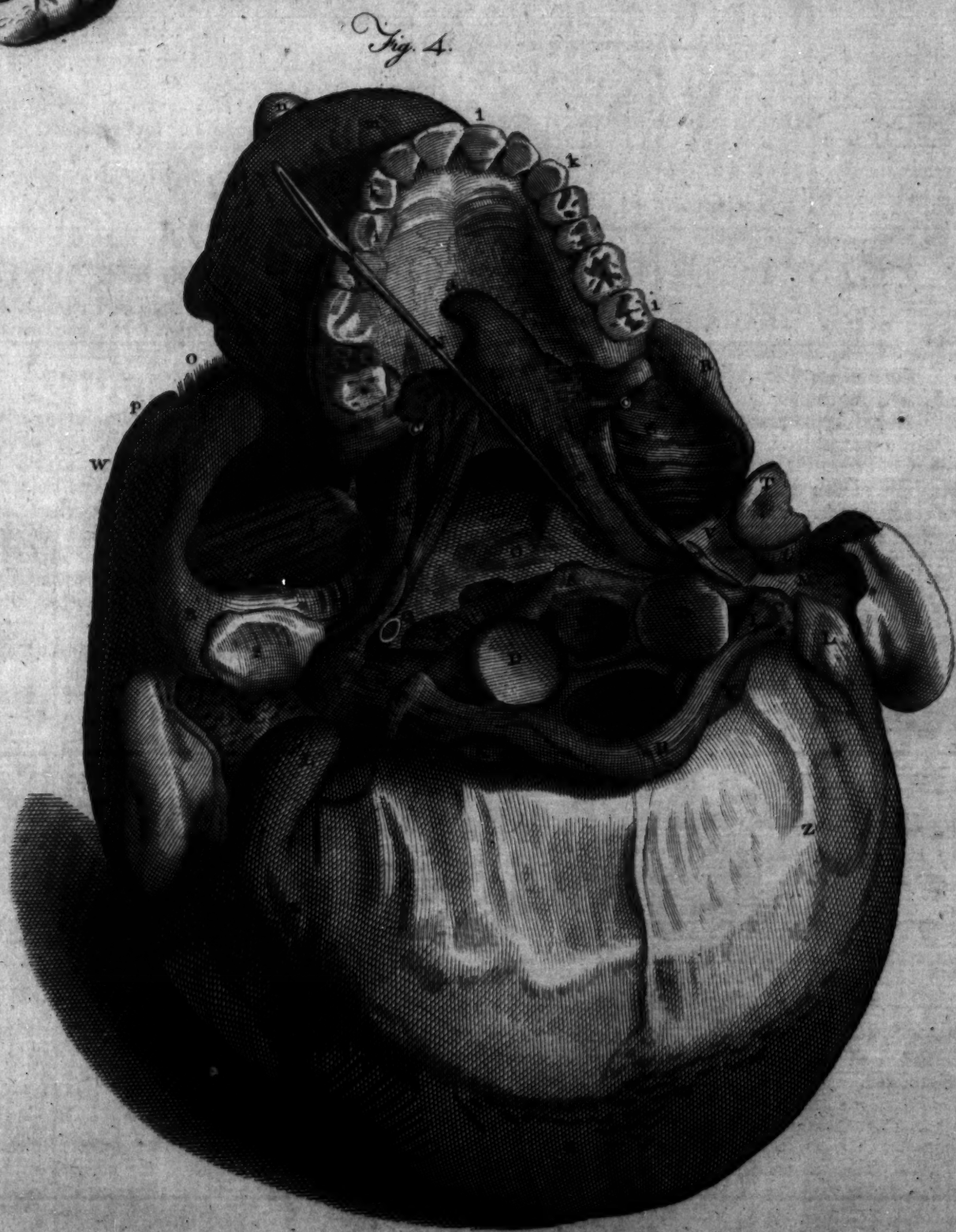
- S The second ethmoidal cell.
 T The wall which closes the third.
 V The surface of the os spongiosum inferius, which respects the septum narium.
 X The same in the os superius.
 Y Its posterior extremity.
 a The lowest passage of the nostril.
 b The middle.
 c The uppermost.
 d A great part of the sphenoid sinus of the left side.
 e Part of the same sinus on the right.
 f The division of the sinuses.
 g The os spongiosum supremum of Morgagni.
 h Part of the fourth ethmoidal cell.
 i A portion of it open.
 k A duct from the left sphenoid sinus to the nostrils.
 l The posterior process of the sella equina.
 m The anterior.
 n Part of the cavity of the cranium.
 o o o The thickness and diploe of the os multiforme, seen in various places.
 p The cuneiform process of the pterygoid wing.
 q The external wing.
 r The mouth of the eustachian tube.
 s Part of the fauces contiguous to the nostrils.
 t The styloid process.
 u The mammillary process.
 x The condyle of the os occipitis.
 y Foramen for the ninth pair of nerves.
 z A prominent line in that bone.
 1. The os petrosum.
 2. The anterior semicircular canal.
 3. The posterior.
 4. The foramen auditorium.
 5. The osseous margin of the palate.
 6. Margin of the Membrana Sneideriana.

FIGURE IV.

The left surface of the Septum Narium.

- A The os frontis and diploe.
 B Part of the frontal sinus.
 C The Crista Galli.
 D Part of the os planum on the left side, which is free of ethmoid cells.
 E The foramina cribrosa.
 F The lamina of the ethmoid bone which forms the septum narium.
 G The place where it is joined with the Vomer.
 H The Vomer.
 I The cartilaginous part of the septum.
 K Part of the upper jaw-bone.
 L L The interior incisivi.
 M The posterior line of the vomer, covered with a membrane.
 N Part of the cuneiform process.
 O Part of the left sphenoid sinus belonging to the part (fig. III. e.)
 P The posterior clinoid process.
 Q The anterior.
 R The sella turcica.
 S S Portions of the septum between the two sphenoid sinuses.
 T Margin between that sinus and the nostrils.

THE



T H E

Thirty-first Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

THE EAR, &c.

FIGURE I.

- A A The external margin of the outward ear, called Helix, and Capreolus, from its tortuous structure.
 B B Anthelix auriculæ.
 C Hircus auriculæ, by some called Antitragus.
 D E These letters circumscribe the concha. D The tragus auriculæ, below which is the lobe.
 F The attollens auriculæ muscle, deriving its origin, which is partly fleshy and partly membranous, from above the temporal muscle, and descending over it to its insertion into the superior part of the cartilage of the root of the auricle.
 G H H The retrahens auriculæ muscle, arising from the mastoid process. The whole muscle is here expressed much larger than life.
 I I Part of the parotid gland adhering to the external ear.
 K L L The excretory ducts arising from that gland, and forming the ductus salivalis superior.
 M Portion of the superior salival duct.

FIGURE II.

Represents the superior part of the Auricle cut off.

- A The skin, &c. divided from the hairy scalp, and freed from the cranium.
 B The internal, or hind-part of the ear next the skull.
 C The inferior part of the auricle.
 D The meatus auditorius.
 E The thickness of its cartilage.

FIGURE III.

Represents the Ramifications of the Salival Duct injected with wax, and freed from the Parotid Gland.

- A The trunk of the salival gland, cut off at its passage over the masseter muscle.
 B B C The ramifications of the salival duct exposed.

FIGURE IV.

The Base of the Skull, the first Vertebra of the Neck, various Muscles, and other parts remaining on it.

- A B C C D D The first vertebra of the neck: A Its anterior part, behind which the tooth-like process of the second vertebra is placed: B Its posterior part, wanting the spinous process: C C The transverse processes: D D Two processes of the first vertebra, which move laterally on the corresponding processes on the upper part of the second vertebra of the neck.

E A cavity immediately behind the fore-part of the first vertebra, furnished with a strong ligament, backwards next the medulla spinalis, in which the tooth-like process of the second vertebra is received.

F The foramen magnum, through which the medulla spinalis passes.

G A small muscle, which, from its situation, is called by the author, Rectus Lateralis.

H The rectus anterior minor muscle.

I I Perforations in the transverse processes of the first vertebra, through which the trunks of the vertebral arteries and veins pass.

K K The trunks of the vertebral arteries, in their contorted passage between the transverse processes of the first vertebra, and foramen magnum, F, of the os occipitis.

L L The mammillary process.

M M Cartilages of the meatus auditorius.

N N A probe inserted into the Meatus a palato ad aurem.

O The glandular membrane, continued from the foramina narium to the inside of the fauces.

P P The styloid process.

Q The carotid artery, cut off near its entry into the os petrosum.

R R Inferior parts of the ossa jugalia.

S A cartilaginous body in the depression of the os temporum, where the processus condyliformis of the lower jaw is articulated.

T The same intermediate cartilage of the articulation raised.

V The smooth sinus in the temporal bone, which received the last-mentioned cartilage.

t Part of the mucilaginous gland of this articulation, adhering to the above-mentioned cartilage.

W The upper part of the temporal bone cut off.

X The os occipitis in like manner sawed off.

Y The occipitalis muscle.

Z Z The thinner part of the os occipitis, where the muscles of the head are inserted.

a The Uvula, supported by the probe N N, inserted into the Iter a palato ad aurem.

b Small glands which appear on cutting off the fauces.

c c The extremities of the pterygoid process.

d d The spheno-ptyergo-staphylini muscles, so called from their origin, progress, and insertion.

e e The spheno-staphylini.

f The musculus pterygoideus externus.

g The musculus pterygoideus internus.

h Some appearance of the septum narium backwards.

i i The dentes molares.

k k The canini.

l The incisores.

m The glands of the lips, as they appear in the inside of the upper lip.

n The tip of the nose.

o The eye-lashes.

T H E

T H E

Thirty-second Anatomical Table

OF THE

H U M A N B O D Y

E X P L A I N E D.

FIGURE I.

REPRESENTS the Ear in its natural situation.

- A B C D The Ear.
 A B C Its three folds.
 D The end or lobe of the ear.
 E The concha. Near E, the orifice of the auditory passage is seen.
 F The situation of the tympanum: The two dotted lines shew the length of the passage.
 G G The squamous part of the temporal bone.
 H The attollens aurem, which is here represented as lying upon the squamous part of the os temporis, because it is divested of the temporal muscle.—For a better view of this muscle, see Part I. Table I. C D.
 I The processus zygomaticus.
 K The processus styloides.

FIGURE II.

Represents the Ear reversed, to shew its second Muscle and its Integuments.

- A The ear reversed.
 B The retrahentes auris muscles, the fibres of which have been divested of their membranes, to render their origins and insertions the more distinct.—See Plate 77. Figure IV. c c c.
 C The place where the second muscle is inserted, stripped of the skin.
 D The skin of the ear, furnished in the lower part with a little fat.
 E The cellular membrane.
 F The pars squamosa.
 G The processus mammillaris.

FIGURE III.

Represents the Arteries which are distributed on the fore-part of the Ear.

- A The external carotid, cut off above the angle of the jaw.
 B The branch which passes behind the ear.
 C The temporal artery.
 D A branch of this artery, which is distributed to the lobe of the ear.
 E A branch of an artery, which perforates the cartilage from

the back to the fore-part, and is distributed to the inside of the concha.

FIGURE IV.

Represents the back-part of the Ear, to shew the Arteries which are behind it.

- A The same trunk of the carotid.
 B D The branch which passes behind the ear, and furnishes it with many ramifications.—It is represented too large.
 C Branch which is distributed to the cells of the mammillary process.
 E The branch which passes through the cartilage, to be distributed to the inside of the concha.

FIGURE V.

Represents the Cartilage of the Ear, and the Cartilaginous passage, divested of all their Integuments.

- A The cartilage of the ear, with its folds.
 B The cartilaginous passage, somewhat flattened.
 C The part of the cartilage which forms the entrance of the passage, and which makes a projection at the fore-part of the concha.
 1. 2. 3. The three interruptions, or fissures, of the cartilaginous passage.

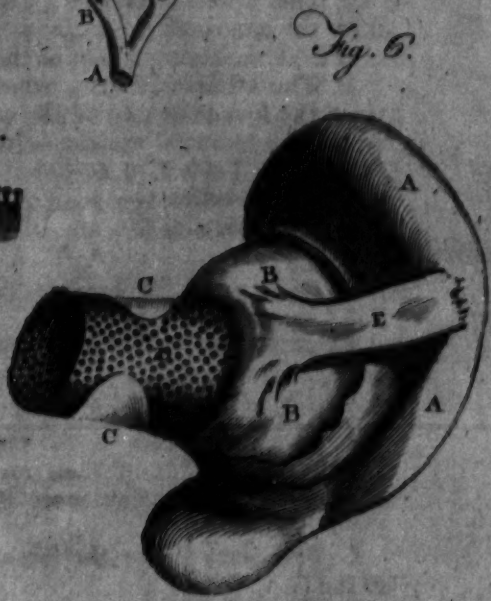
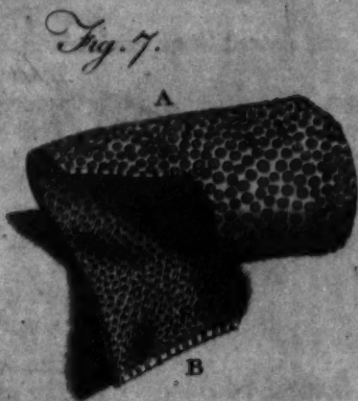
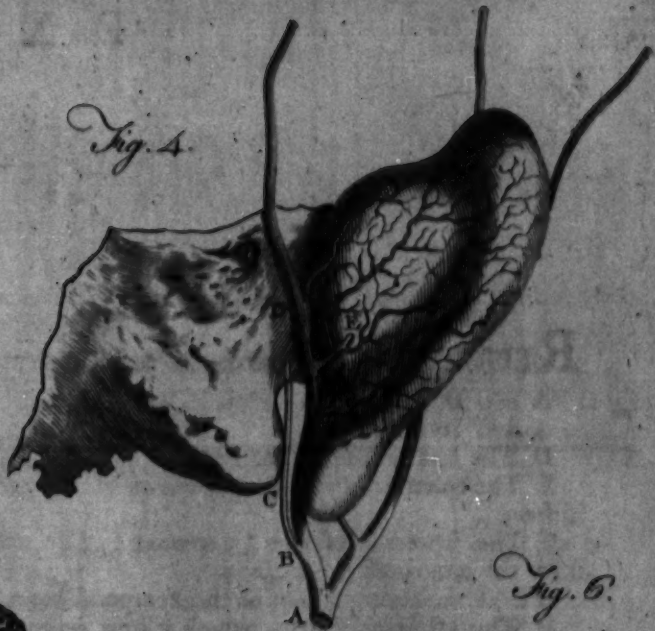
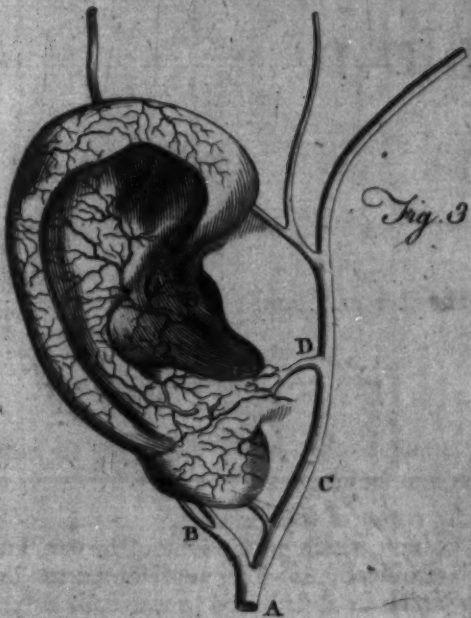
FIGURE VI.

Represents the back-part of the Ear, and the upper part of the Cartilaginous Passage, and the Ligament which ties the Concha to the Temporal Bone.

- A A The back-part of the ear.
 B B The back-part of the concha, divested of the skin.
 C C The appendices which terminate the cartilage in the upper part.
 D The superior part of the passage, which is formed of a merely glandular membrane.
 E The ligament of the Ear reversed.

FIGURE VII.

Represents the Glandular Membrane which invests the Cartilaginous Passage. It appears in this place three times



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times larger than nature, the better to distinguish the parts.

- A The exterior part of the glandular membrane.
- B The passage opened, in which the small hairs, and the orifices of the excretory ducts of the glands, called Glandulae Ceruminosae, are visible.

FIGURE VIII.

Represents the diameter of part of the Passage, to shew that the glands are half-buried in the thickness of the membrane: Some of them are drawn out, to point out more plainly how deep they are situated.

FIGURE IX.

Represents the Os Temporis.

- A The pars squamosa.
- B B The processus zygomaticus.

C The little cavity, into which the ligament of the ear is inserted.

D The entrance of the bony passage of the ear.

E The inequalities which are on that side of the entrance next the face.

F The membrana tympani in situ.

G The processus mammillaris.

H The processus styloides.

I The tube which incloses the internal carotid.

K A small sinus, which is between the bony passage and the pars squamosa, through which the external muscle of the malleus penetrates into the tympanum.

L The extremity of the bony part of the Eustachian tube.

M The cavity which receives the condyloid process of the lower jaw.

FIGURE X.

Represents the Bony Passage taken off from the Temporal Bone.

T H E

Thirty-third Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

FIGURE I.

REPRESENTS the Temporal Bone, twice as large as nature, in which all the squamous part is cut off, and only as much of the bony part taken away as was necessary to shew the Membrana Tympani bare.

A The membrana tympani in its natural situation, viewed externally.

B The handle of the malleus, which is joined to the back-part of this membrane.

C The long branch of the incus, which appears across this membrane, but is at a little distance from it.

D The head of the malleus.

E The body of the incus, with its short branch

F, which in this section appears plainly.

G The bony passage, half of which is cut off.

H The processus mammillaris.

I The processus Styloides.

K The external muscle of the malleus in situ.

L A punctured line, which shews the thin process of the malleus, into which this muscle is inserted.

FIGURE II.

Represents the Membrana Tympani, to shew the obliquity of its natural situation.

FIGURE III.

Represents the Membrana Tympani in the same view, and fixed in the extremity of the Bony Passage; it also shews in what manner the side of this Passage next the Face recedes, at the lower part, from the Membrana Tympani, and how it approaches insensibly nearer to it as it ascends.

A A A The inside of the bony passage next the face.

FIGURE IV.

Represents a Lateral View of the Incus and Stapes in situ.

A The body of the incus.

B The short branch of the incus, which, in this situation, appears exactly in front.

C Its long branch.

D The head of the stapes, which is joined with the long branch of the incus, by the intervention of the os orbiculare.

FIGURE V.

Represents part of the Bones of the former Figure, four times larger than nature.

A The beak of the long branch of the incus.

B The os orbiculare.

C The head of the stapes, with its cavity.

FIGURE VI.

Represents the Stapes, five times larger than nature.

A The head of the stapes.

B Its collum, or neck.

C C Its branches, which are grooved upon the inside.

D Its basis.

E The membrane of the stapes.

FIGURE VII.

A similar View of the Basis of the Stapes.

D The basis of the stapes.

FIGURE VIII.

Represents the Stapes, with its Muscle, in situ.

A The stapes.

B Its muscle: The whole represented twice as large as nature.

FIGURE IX.

Represents the Officula, seen as if the Eye were placed posteriorly, or in that passage which penetrates into the Processus Mammillaris.

A The body of the incus.

B Its short branch, seen in front.

C Its long branch.

D The back-part of the handle of the malleus.

E The upper part of the stapes.

FIGURE X.

Represents the Officula in situ, viewed from the opposite side, the Eye being placed in the posterior extremity of the Eustachian Tube.

A The

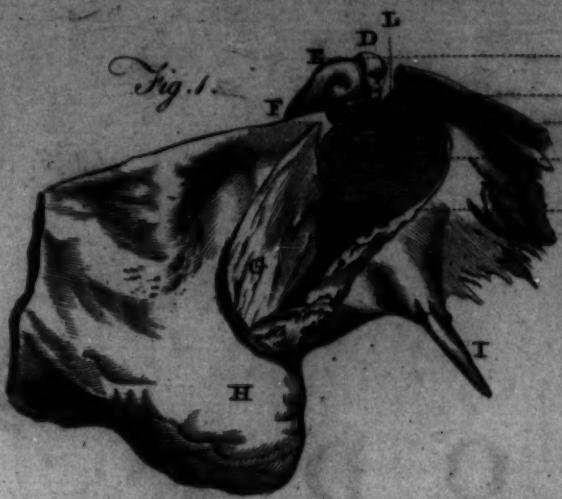


Fig. 2.



Fig. 3.

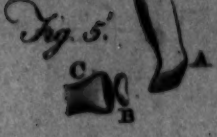


Fig. 7.

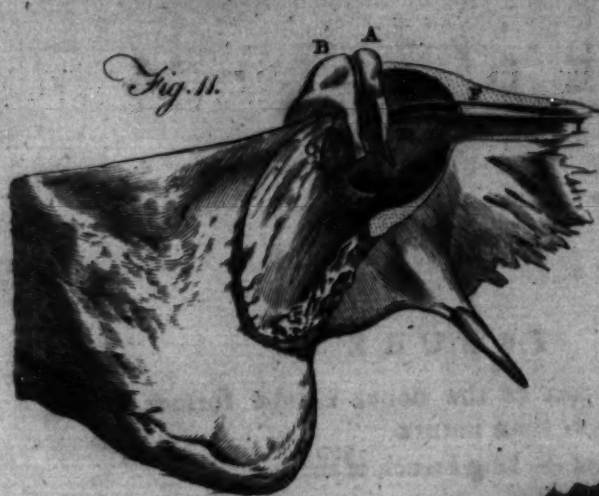


Fig. 12.



Fig. 13.

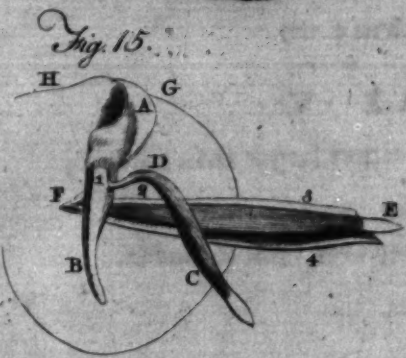
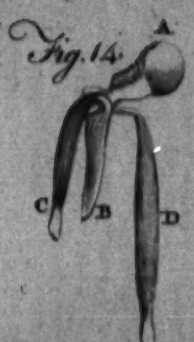


Fig. 16.



Fig. 20.



Fig. 21.



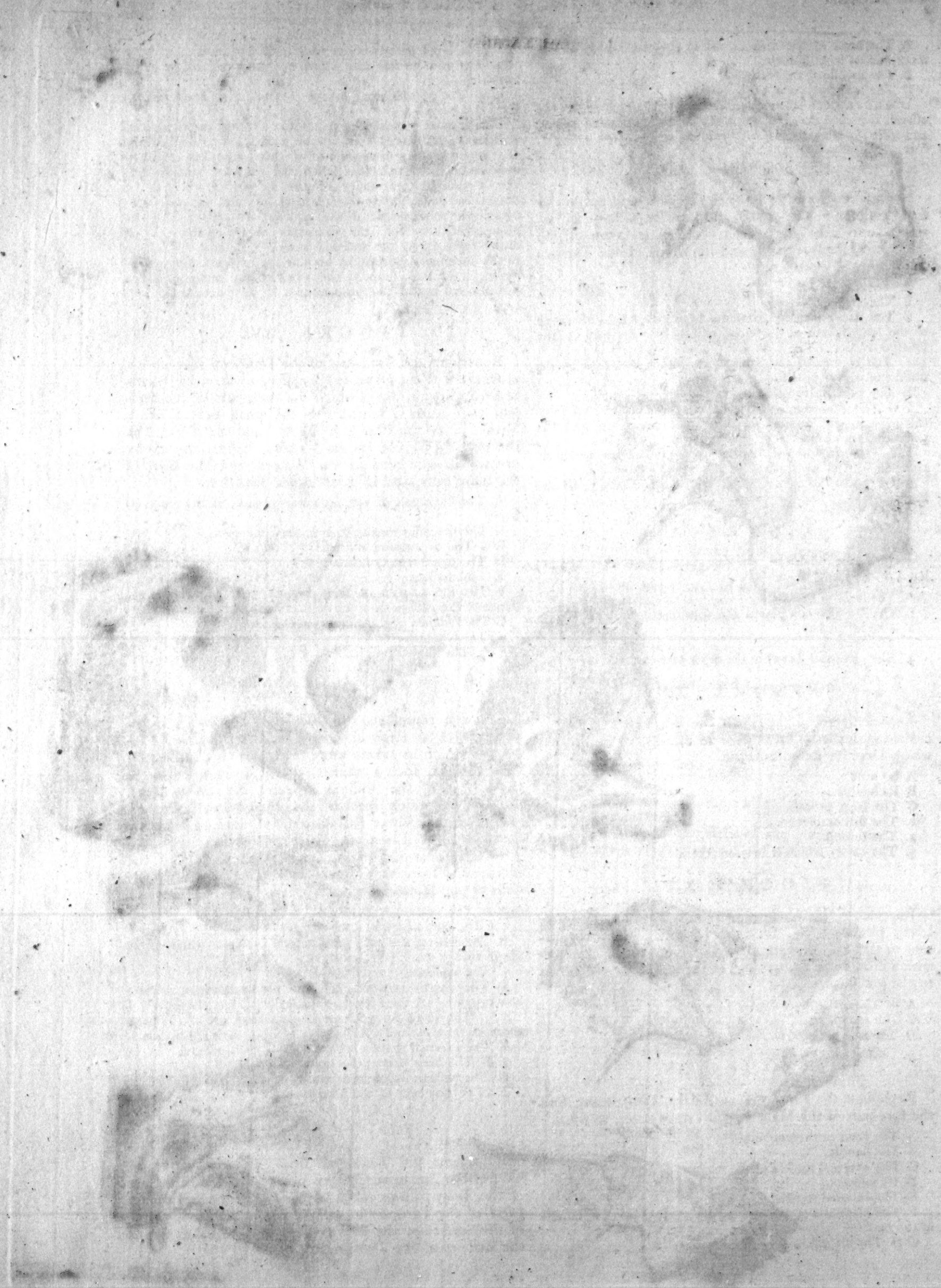
Fig. 18.



Fig. 19.



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- A The head of the malleus, which covers the body of the incus and its short branch.
 B The handle of the malleus.
 C The long branch of the incus.
 D The stapes seen laterally.—The virgula which crosses the ossicula is placed here, to distinguish which are situated before, and which behind, in these different views.

FIGURE XI.

Represents the same Bone as Figure I. and cut in the same manner. The whole is also twice as large as nature;—only, the membrana tympani is taken off, to shew the Ossicula in situ, and the inside of the Tympanum, with its contents.

- A The malleus.
 B The incus.
 C The stapes, seen in front, its head covered by the beak of the long branch of the incus, and its basis stopping up the fenestra ovalis.
 D The bottom of the tympanum, which is formed by the surface of the os petrosum.
 E The fenestra rotunda.
 F G The semi-canal, which incloses the internal muscle of the malleus,—the anterior part being seen without, and the posterior part within the tympanum.
 H I The bony part of the Iter a palato ad aurem, or Eustachian tube; half of it being cut off, to shew its cavity.
 i The end of the tube which incloses the muscle of the stapes.

FIGURE XII.

Represents the Incus, on that side where it is articulated with the Malleus.

- A The body of the incus.
 B The short branch placed almost in front.
 1. The first cavity.
 2. The second.
 3. The eminence between the other two cavities.

FIGURE XIII.

Represents the Malleus, on the side where it is articulated with the Incus, to shew its eminences and cavity, which serve for its articulation.

- A Its head.
 B Its handle.
 C The large process.
 1. The first eminence.
 2. The second.
 3. The cavity which is between them.

FIGURE XIV.

Represents the Malleus with two Muscles, the Eye being placed in the Eustachian Tube, to shew the extent of the two Muscles, particularly that of the Internal, which crosses the Tympanum in its progress to be joined to the Malleus.

- A B The malleus.
 C The external muscle.
 D The internal muscle.

FIGURE XV.

Represents the circumference of the Tympanum, and the fore-part of the Malleus, with its Muscles, in situ.

- A The head of the malleus.
 B The handle.
 C The external muscle of the malleus.
 D Its insertion.
 E The internal muscle.
 F The place where it bends to be inserted into the handle of the malleus, below the external muscle.
 G H The circumference of the tympanum.

1. The large process of the malleus seen in front.
 2. The thin process into which the external muscle is inserted.
 3. 4. The cellular coat of the internal muscle opened, to shew the muscle.

This figure serves to explain the manner in which two muscles of the malleus act, in the contraction and relaxation of the membrana tympani:—For their insertions make it easy to be conceived, that when the external muscle C D acts alone, the extremity of the handle, marked B, is drawn outwards, because the head of the malleus rests against the tympanum, at the part G;—but when the two muscles act together, the extremity of the malleus being drawn inwards, by the internal muscle E F, causes a tension in the membrana tympani; because the external muscle C D draws, or at least supports the head of the malleus, which does not rest against the tympanum at H, as it does at G.

FIGURE XVI.

Represents the Back-part of the Temporal Bone, with as much of it cut off as was necessary to shew the Membrana Tympani, upon which the back-part of the Malleus and Incus is seen,—with the small branch of a Nerve, called the Chorda Tympani, and the Tendon of the external Muscle of the Malleus, besides the cavity upon which the head of the Malleus, and the body of the Incus rests,—all in their natural situation.

- A The back-part of the squamous process of the temporal bone.
 B The processus mammillaris in the same view.
 C C The os petrosum cut off.
 D The membrana tympani.
 E The malleus.
 F The incus, with its short branch, resting upon the entrance of the passage into the cells of the mastoid process.
 G The foramen of the auditory nerve.
 1. The tendon of the external muscle of the malleus.
 2. 3. The chorda tympani.

FIGURE XVII.

Likewise represents the Back-part of the Os Temporis, twice as large as nature, all the Squamous Process of which is taken away, and it is sawed from top to bottom in such a manner, that it is divided through the middle of the Mastoid Process: By this is shewn the Groove which receives the Membrana Tympani, and the place where this Groove is wanting: It also shews how the side of the Bony Passage next the Face grows flat near its bottom, and covers a part of the Membrana Tympani: And, lastly, it discovers all the Cells of the Mastoid Process.

- A A The groove.
 a a The part where it is wanting.
 B The side of the bony passage next the face, which grows flat in this place.
 C The malleus.
 D The chorda tympani, which is drawn inwards, to shew how it passes over the external muscle.
 2. 3. The small sinus which is excavated out of the bone above the groove, and which serves as a pulley to the muscle.
 E The external muscle, which is also drawn inwards.
 F F The bony part of the Eustachian tube.
 G The passage which leads into the mastoid process.
 H H H The cells of the same process.

FIGURE XVIII.

Represents the Temporal Bone, twice as large as nature, the Squamous Process being removed, and part of the Bony passage taken away, and in general all the parts of the Tympanum which might obstruct the view of the Surface of the Os Petrosum, which makes one of the Parietes of the Tympanum.

A Part

- A Part of the bony passage.
 B The protuberance which is on the surface of the os petrosum, and which covers the lamina spiralis.
 C The fenestra ovalis.
 d The fenestra rotunda.
 e The bony canal which incloses the muscle of the stapes, from which the tendon is shewn extruded, to be inserted into the head of the stapes.
 f The canal which incloses the portio dura of the auditory nerve.
 g A punctured line to shew the circumference which the membrana tympani takes up, and the size of the tympanum.
 H I The semi-canal which incloses the internal muscle of the malleus.
 H That part of this semi-canal which is extruded from the tympanum.
 I The part which is in the tympanum.
 K Half of the bony passage which leads from the ear to the palate.

FIGURE XIX.

Represents the Temporal Bone nearly in the same view as the preceding Figure, but not larger than nature, to shew the stapes in situ and the Eustachian Tube in its natural direction.

- A The stapes in situ.
 B C The bony part of the canal.
 D Its cartilaginous part, which grows thicker and larger at its extremity.
 E Its membranous part turned back.

FIGURE XX.

Represents the Temporal Bone, twice as large as nature, all the Squamous Process being removed, and sawed perpendicularly down, a little distance before the Groove, to shew the depth of the Tympanum, and the Cells of the Mastoid Process, to discover their Vessels, and those which are spread upon the Membrane which lines the Tympanum.

A A considerable artery, which is a branch from that of the dura mater.

B A vein which is sent off at the entrance of the internal jugular, which is at the bottom of the tympanum.

C The vessels which are sent off from the cells of the mastoid process to be distributed to the tympanum.

FIGURE XXI.

Represents the Right-side of the Upper Jaw, one third less than nature. All the upper part of the Cranium is taken off, and the rest cut perpendicularly through the middle of the Nose, to shew the Orifice of the Eustachian Tube.

A A The cavity of the nose, with its laminae.

B The bottom of the palate.

C The orifice of the Eustachian tube.

I Its cartilaginous side, which forms a border in the shape of a crescent.

D The uvula cut through the middle.



T H E

Thirty-fourth Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

FIGURE I.

REPRESENTS the Temporal Bone, twice as large as nature. It is prepared in such a manner as to shew the Cochlea and the Semicircular Canals in situ.

A The vault of the vestibulum.

B The fenestra ovalis marked by a punctured line.

C The fenestra rotunda open.

D The lamina spiralis marked by a punctured line, divested of the spiral canal which covers it, and of the membrane which connects it to the surface of this canal.

1. 2. 3. The three semicircular canals in their natural situation.

1. The superior.

2. The middle.

3. The inferior.

The middle and inferior are open, to shew their cavities.

FIGURE II.

Represents the inside of the covering of the Cochlea taken off, to shew the Semi-oval Spiral Canal.

FIGURE III.

Represents the height of the Cochlea much larger than nature. To obtain this view of it, the fore-part of its covering only is taken off by a perpendicular Section: This shews how the Lamina makes two turns and a half round the Axis; how it is fixed to the surface of the Canal, which serves as an arch to it; and how the sides of this Canal, which are connected to the Axis, become as thin as the Lamina.

A The inferior portion of the vestibulum, left to shew how the lamina spiralis proceeds out of its cavity, and passes before the fenestra rotunda.

B The fenestra rotunda closed up by a thin membrane, like the membrana tympani.

1. 2. 3. The two circumvolutions and a half of the lamina spiralis round the axis.

4. 5. 6. The two turns and a half round the spiral canal.

FIGURE IV.

Represents the Lamina Spiralis separated from the surrounding bone, much larger than nature, with the Membrane which connects it to the surface of the Canal.

PART III.

1. 2. 3. The lamina spiralis.
4. 5. 6. The membrane which is fixed to it, and which is distinguished from it by a line which is drawn between both.

FIGURE V.

Represents the Axis much larger than nature, upon which the Traces of the Circumvolutions of the Lamina Spiralis and of the Spiral Canal are observable.

1. 2. 3. The traces of the windings of the lamina spiralis, which are perforated by a great many minute holes, affording a passage to the filaments of the auditory nerve.

5. 6. The traces of the side of the spiral canal.

FIGURE VI.

Represents the Cochlea standing, and half of it cut perpendicularly off, much like Figure III. excepting that here the Bone is entirely removed. This Figure is meant to illustrate the Third; and for its explanation, it is sufficient to remark, that the Lamina appears here disengaged from the surface of the Canal, that it may shew the inside of this same Canal, and how its sides are elongated, to be connected to the Axis.

FIGURE VII.

Represents the Vestibulum and the three Semicircular Canals laid open, to shew the distribution of their Vessels.

a The branch of an artery which enters the vestibulum.

b A ramification of this artery, which passes through the common orifice of the vestibulum, and which is distributed into the superior and inferior canals.

c The small branch which belongs to the middle canal.

FIGURE VIII.

Represents the Arteries of the Cochlea, Vestibulum, and three Semicircular Canals.

A The fenestra rotunda.

B The orifice of the passage which gives entrance to the vessels, and which is situated at the entrance of the scala inferior of the cochlea: It shews that one part of these vessels is distributed to the cochlea, and the other to the vestibulum and the three semicircular canals.

FIGURE

FIGURE IX.

Represents a Portion of the Vestibulum and the three Semicircular Canals, to shew their natural situation and their Orifices.

- A The inferior portion of the vestibulum.
- B The superior semicircular canal.
- C The inferior.
- D The middle.
- 1. The orifice of the superior semicircular canal.
- 2. The first orifice of the middle canal.
- 3. The orifice of the inferior canal.
- 4. The other orifice of the middle canal.
- 5. The common orifice to the superior and inferior canal.
- 6. The first foramen, which gives entrance to one of the branches of the portio mollis.
- 7. The second foramen, which gives entrance to another branch of the same nerve.

FIGURE X.

Represents the Vestibulum in the same disposition as in the preceding Figure, with the Nerves of the three Semicircular Canals.

a A branch of a nerve which enters the vestibulum by a foramen marked 6. in Figure IX. It is divided into three branches, the first of which enters into the orifice of the superior semicircular canal; the second into the superior orifice of the middle canal; and the third, which is the least, descends into the common orifice.

b The branch which enters by the foramen marked 7. in Figure IX. and is divided into two ramifications, the inferior of which enters the orifice of the inferior canal, and the other passes into the common orifice, and unites with the third ramification of the branch marked a.

These nerves are represented somewhat larger than nature.

FIGURE XI.

Represents the Basis of the Brain, divested of all its Vessels, to shew the Origin of the Ten Pair of Nerves, which proceed from the Medulla Oblongata. The Posterior Lobes are cut off, i. e. the Incision passes through the part where a great Lateral Branch of the Carotid Artery is sent off upon the substance of the Brain into the Interstices of its Lobes.

- A A The fore-part of the brain reversed.
- B B The cerebellum.
- C C The place where a part of the brain has been cut off.
- D D The corpora striata. Their posterior part is here shown, and a portion of them is cut off with the brain.
- E E The Thalami nervorum opticorum.
- F F The crura of the brain, uniting at the fore part of
- G G The tuber annulare.
- H H The first pair of nerves, named the Olfactory, which take their origin from the basis of the corpora striata, by medullary fibres, marked h h, and which increase in size in the place where they wind about near the optic nerves.
- I I The optic, or second pair of nerves, from their origin from the thalami, to their exit out of the brain.
- K K The third pair of nerves, called Oculorum Motorii.
- L L The fourth pair of nerves, called Pathetic.
- M M The fifth pair of nerves.

NN The sixth pair of nerves.

OO The auditory nerves, which form the seventh pair. They are divided from their origin into two branches, the largest and uppermost of which is the *Portio Mollis*.

PP The eighth pair of nerves, arising from the medulla oblongata.

QQ The ninth pair of nerves, marked on one side only of the medulla, and removed out of its natural situation. On the other side the origin only is shewn.

RR The tenth pair of nerves, which likewise proceed from the medulla oblongata.

S The medulla cut off at its entrance into the spinal canal.

TT The nervi accessorii, which arise from the upper part of the spinal marrow.

U The infundibulum.

X X The corpora albicantia.

Y Y Two eminences of the medulla oblongata, called Corpora Pyramidalia.

Z Z Two small filaments of nerves, arising from the medulla, which contribute to the formation of the nervi accessorii.

FIGURE XII.

Represents the back-part of the Os Petrosum, much larger than nature, and as much of it taken off as was necessary to discover the three Semicircular Canals, and the extremity of the Canal of the Auditory Nerve, together with the Foramina there situated.

A The canal of the auditory nerve taken off.

B The semicircular canals.

C The basis of the axis of the cochlea, pierced by numerous small holes, which give entrance to the nervous filaments which are distributed to all the turnings of the lamina spiralis.

D The entrance of the canal which incloses the portio dura.

E The foramen which gives entrance to the branch marked e, in Figure XIII.

F Another foramen which gives entrance to the third ramification of the portio mollis, marked f in Figure XIII.

FIGURE XIII.

Represents the Auditory Nerve much larger than nature, which appears as if it were torn off from the Os Petrosum, to shew how it is divided at the bottom of the Passage.

A The auditory nerve divided into two branches.

B B The portio mollis.

C C The portio dura, part of which is placed at the top of the figure, to shew the filaments of one of the branches of the portio mollis. The trunk of the portio dura enters into the foramen marked D, in Figure XII.

D A large branch of the portio mollis, which is divided into a great many small filaments which enter the little holes situated at the basis of the axis of the cochlea, and are distributed to all the circumvolutions of the lamina spiralis.

E Another branch of the portio mollis, which enters the foramen marked F, in Figure XII. See the distribution of these two last branches in Figure X. of this plate. The branch e is there marked by the letter a, and the branch f by the letter b.

N. B. The Figures of the above Table are accurately copied from the original;—but several of them deviate, very considerably, from nature.

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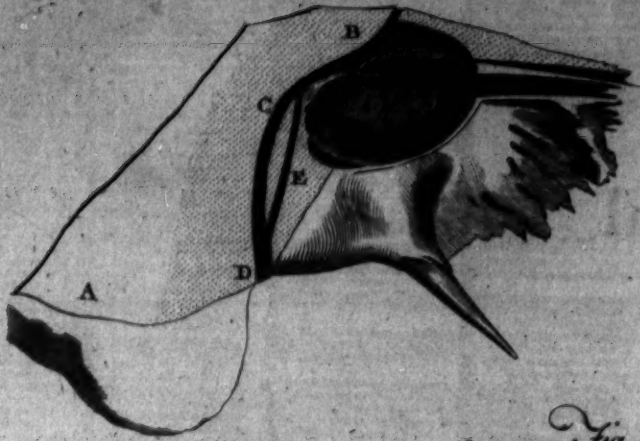


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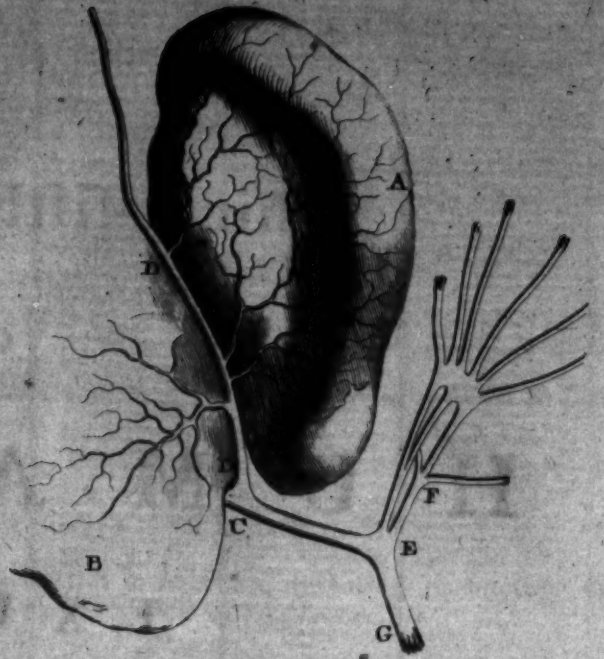


Fig. 6.



Fig. 4.

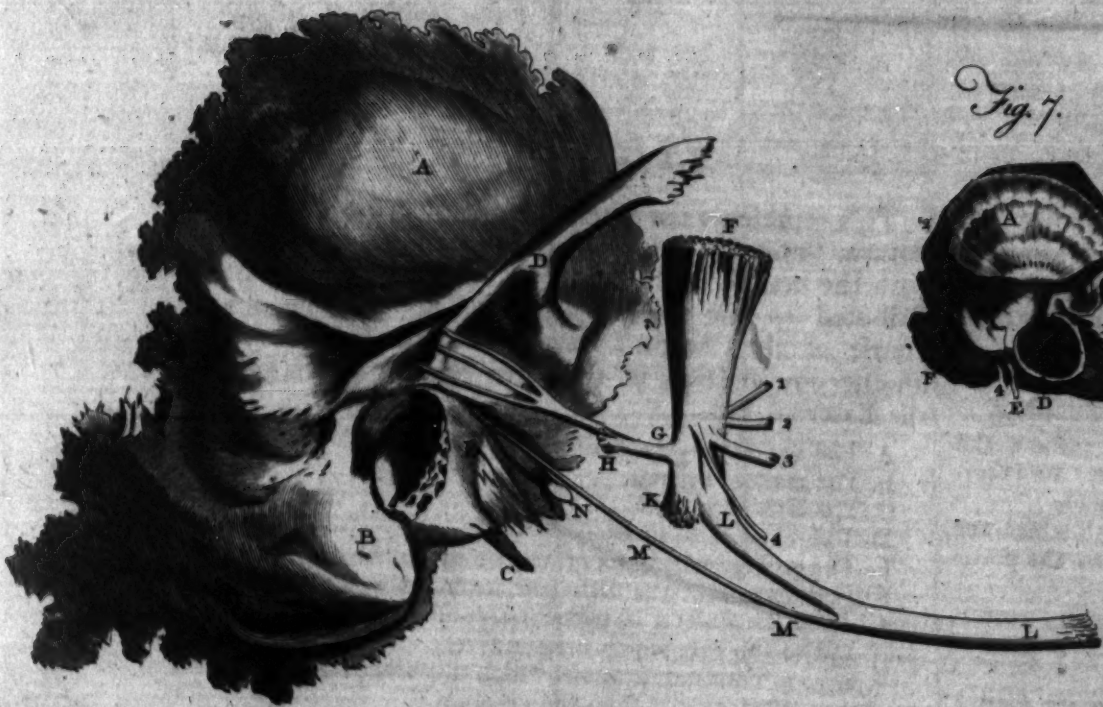


Fig. 7.



Fig. 5.

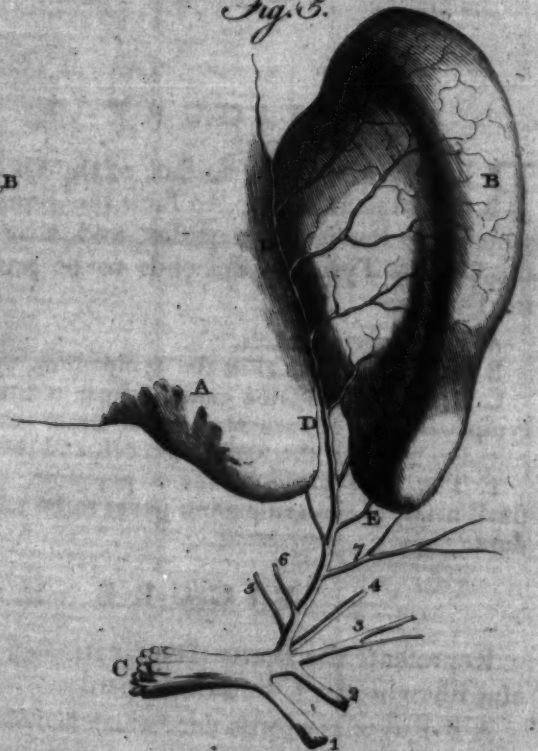


Fig. 8.



Fig. 11.



Fig. 9.



Fig. 10.

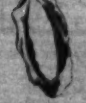


Fig. 12.

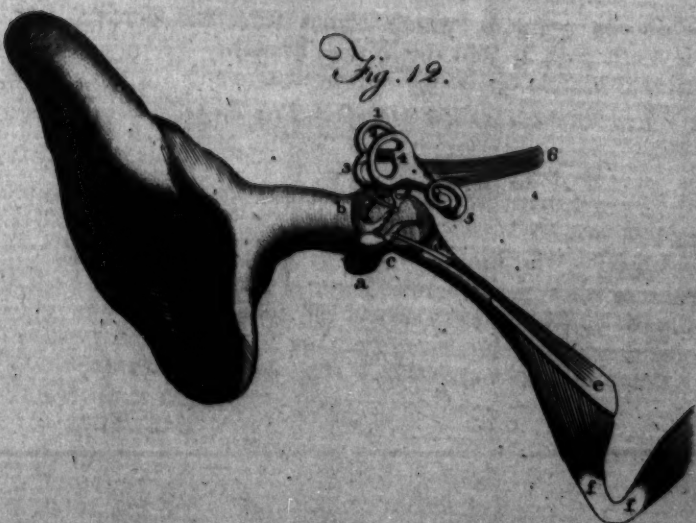


Fig. 14.



Fig. 13.



T H E

Thirty-fifth Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

FIGURE I.

REPRESENTS the surface of the Os Petrosum, twice as large as nature, to shew the Bony Canal through which the Portio Dura passes, and that through which the Chorda Tympani descends to be joined to the Portio Dura.

- A The mastoid process.
- B C The bony canal in the tympanum.
- C D Part of the same canal, which is situated without the tympanum, and is excavated out of the os petrosum. Its extremity lies between the mastoid process and the styloides.
- E The little canal of the os petrosum, through which the small nerve of the tympanum passes to be joined to the portio dura.

FIGURE II.

Represents the Portio Dura extracted from its Canal, and likewise the Chorda Tympani.

- A B Part of the portio dura which is inclosed in the tympanum.
- B C Part of the portio dura which is concealed in the os petrosum.
- D E That part of the chorda which crosses the tympanum.
- E F Part of the same chorda, which, passing out of the tympanum, is concealed in the little canal marked E, in the preceding figure, and which is joined to the portio dura.

FIGURE III.

Represents the Ear drawn forward, to shew the ramifications of the Portio Dura which are distributed upon it.

- A The ear drawn forward.
- B The mastoid process.
- C The trunk of the portio dura, passing out of the os petrosum.
- D D The first branch of this nerve, which ascends behind the ear, and distributes a great many filaments to it and the mastoid process.
- E The division of the portio dura into two branches.
- F The superior,
- G The inferior branch.

FIGURE IV.

This represents the whole Temporal Bone as large as nature, somewhat reversed, and the under part shewn, with the branch of the fifth pair of nerves, which is distributed to the Lower Jaw, to shew the origin and course of the Chorda Tympani, and the distribution of another ramification of the same Nerve, which goes to the External Ear.

- A The squamous process of the temporal bone.
 - B The mastoid process.
 - C The styloid process.
 - D The zygomatic process.
 - E The passage which goes from the ear to the palate.
 - F The branch of the fifth pair, called the Inferior Maxillary Nerve, because it is particularly distributed to the lower jaw, and to the part which surrounds it.
 - 1. 2. 3. 4. Four ramifications which this branch furnishes immediately after its exit from the cranium.
 - 1. That which goes to the temporal muscle.
 - 2. To the external masseter.
 - 3. To the buccinator, and to the glands of the cheek.
 - 4. To the pterygoideus internus.
 - G Another ramification, which it also sends off at its exit.
 - H A branch of this ramification, which goes to that of the portio dura, which descends by the angle of the lower jaw.
 - I The distribution of the ramification G to the external ear, the branches of which are cut off.
 - K The branch which enters into the lower jaw cut off.
 - L L The branch which goes to be distributed to the point of the tongue.
 - M M The chorda tympani, which comes from the portio dura of the seventh pair, to join the lingual branch.
 - N The external muscle of the malleus in situ.
- The nerve F and its branches are represented too large.*

FIGURE V.

- A The mastoid process.
- B The back-part of the Ear.
- C The trunk of the second vertebral pair of nerves.
- 1. 2. 3. 4. 5. 6. 7. Many branches cut off, which this nerve sends to the neighbouring muscles and nerves.
- D D The branch of the nerve which ascends to the external ear.
- E E The

E E The branch which is lost in the lobe of the ear, and cartilaginous passage.

FIGURE VI.

Represents the Ear of a Child one year old.

- A The upper part of the ear.
- B Its cartilaginous passage.
- C The membrane which connects the cartilaginous passage to the bony ring, and afterwards indurates to form the beginning of the osseous part of the meatus auditorius externus.
- D The bony ring.
- E The zygomatic process.

FIGURE VII.

Represents the fore-part of the Temporal Bone of a Fœtus.

A The squamous process, the small bony fibres of which are easily distinguished, as they also are in all the other bones which compose the cranium of a fœtus.

2. 3. The sides of its circumference, which are yet cartilaginous.

- B The zygomatic process.
- C The membrana tympani.
- D The bony ring, which receives the membrana tympani.
- E The styloid process, which is as yet cartilaginous.
- F The mastoid process, which is yet very small.
- 4. The foramen, through which the portio dura passes out.
- G Marks an obscure line, which is the part where the squamous is separated from the mastoid process.—These two bony parts are firmly united in adults.
- H The canal which incloses the internal carotid.
- I The foramen, where the tube which goes from the ear to the palate is connected.

FIGURE VIII.

Represents the back-part of the Temporal Bone.

- A The squamous process.
- B B The part where it is separated from the os petrosum.
- C The superior semicircular canal, which is seen without any preparation.
- D The inferior.
- E The place where they communicate.
- F A considerable fossa which is situated under the superior canal, and which is filled up and effaced as the fœtus grows older.
- G A foramen which is in the passage of the portio dura.
- H The foramen of the auditory nerve.

FIGURE IX.

Represents the Bony Ring, somewhat reclined to shew the Groove.

- A The bony ring inclined to one side.

FIGURE X.

Represents the same Ring, inclining in another direction, to shew the rest of its Groove.

FIGURE XI.

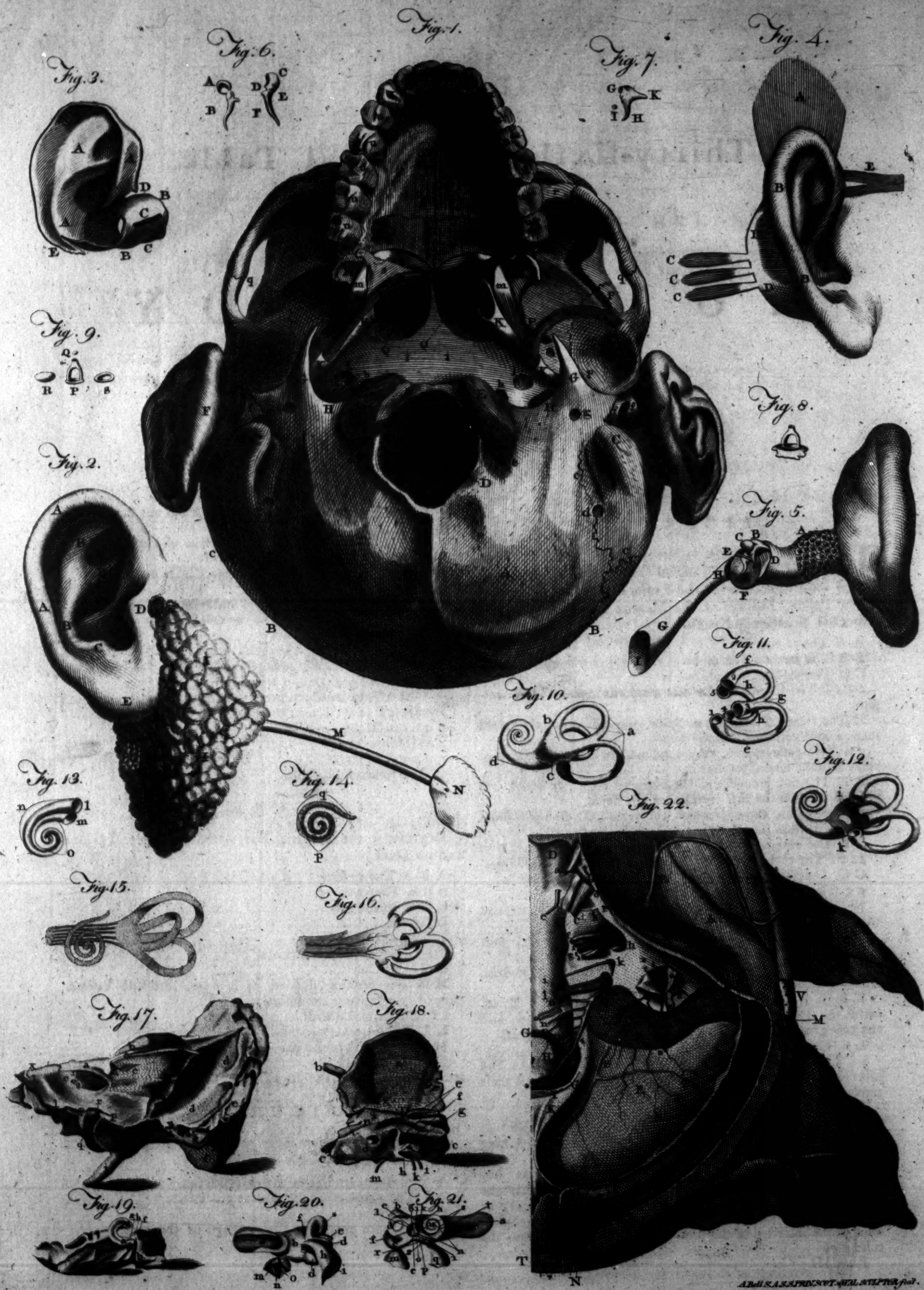
Represents the Membrana Tympani, twice as large as nature, half of it divested of a Membrane which covers it.

- A The membrana tympani.
- B A mucilaginous matter, indurated into a membrane, which covers it in the fœtus.

FIGURE XII.

Represents the Ear, from the inferior part, or where it looks towards the Face, but turned a little towards the Occiput.

- a The extremity of the fallopian aqueduct.



T H E

Thirty-sixth Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

FIGURE I.

THIS Figure represents the External Surface of the Base of the Skull, raised anteriorly, in order to obtain a distinct view of the Eustachian Tubes, Muscles of the Palate, Fissures of the Meatus Auditorii, and the respective situations of each.

- A A The os occipitis.
 B B The lambdoid suture.
 C C The mammillary processes.
 c c c c The sutures of the ossa temporum, with the os occipitis.
 D The foramen magnum occipitis, through which the spinal marrow and vertebral arteries pass.
 d d Two passages, not very constant, for the transmission of veins into the lateral sinuses.
 E E The two processes of the occipital bone, by which it is articulated with the first vertebra of the neck.
 e e Foramina, through which the vertebral veins pass from the diverticulum jugularium.
 F F The external ears.
 f f f f The cartilages of the meatus auditorii, with their fissures.
 G G The styloform processes.
 g g The foramina stylo-mastoidea.
 H H Holes through which the lateral sinuses pass, to form the internal jugular veins.
 h h Holes for the transmission of the nerves of the ninth pair.
 I I Holes for the entrance of the internal carotid arteries.
 i i The membrane lining the interior parts of the nostrils, reaching from thence to the pharynx, and left *in situ*.
 K K, K K The Eustachian tubes, two of which, K K, towards the styloform processes, point out their osseous part; and the other two, K K, mark their cartilago-ligamentous part.
 L L The mouths of the tubes.
 s s The internal wings of the pterygoid processes, over the inferior part of which the circumflexores palati transmit their tendons.
 M M The external wings of the pterygoid processes.
 m m The circumflexores palati, the tendons of which pass over the inferior part of the wings, s s, and then again coming into view, terminate in the palate.
 n n The levatores palati, the right of which is *in situ*, but the left cut off from its fellow, and drawn aside, that the progress and termination of the tube placed under it may be more distinctly observed, and likewise to obtain a complete view of the insertion of the former muscle of the tube into the tube itself.

PART III.

O The part where the above left-muscle was cut from its fellow.

o o Holes for the entrance of the arteries of the dura mater, and immediately before these are seen, at

P P, Holes through which the greater branches of the fifth pair of nerves pass.

p p p p Sutures of the temporal and sphenoid bones.

Q Q The internal foramina of the nose.

q q The zygomatic sutures.

r r Sutures between the superior maxillary and malar bones.

S S Holes for the passage of the blood-vessels to the palate.

T Suture between the two palate bones.

V Suture between the superior maxillary bones.

Between T and V is seen the transverse suture of the palate.

u u u u u Dentes molares.

x x Dentes canini.

y y y Incisores.

2. The foramen incisivum.

FIGURE II.

Represents the External Ear, with the Parotid Gland and its Duct.

- A A A The helix.
 B B B The anthelix.
 C The antitragus.
 D The tragus.
 E The lobe of the ear.
 F F The Cavitas Innominata.
 G The scapha.
 H H The concha, divided, as it were, into two cavities, namely, the superior and inferior.
 I I The parotid gland.
 K L The lymphatic glands.
 M M The duct of the parotid.
 N The orifice of the duct, opening into the cavity of the mouth, with part of the lining of the mouth.

FIGURE III.

Represents the Cartilage of the External Ear, and Meatus Auditorius, with its Fissures.

- A A A The cartilage of the external ear.
 B B The cartilage of the meatus auditorius.
 C C Its fissures.
 D The acute process of the cartilage of the auricle.

E That

E That portion of the same cartilage, which is separated from the remaining cartilage of the auricle, at the extremity of the helix.

FIGURE IV.

Shews the Muscles common to the Ear and Head.

- A The superior muscle.
- BB The helix turned towards the anterior parts, that the posterior muscles and transverse fibres may be more distinctly brought into view.
- CCC The posterior muscles.
- DD The transverse fleshy fibres on the back part of the ear.
- E The anterior muscle.

FIGURE V.

Shews, along with the Ear, the Meatus Auditorius, and its Glands; the Membrana Tympani, and Cord, the Incus, the Malleus, and Eustachian Tube;—all joined together in such a manner, that the true connection of each with the other, and likewise their position, may be exactly seen. They are all viewed from the posterior part, and also somewhat inclined towards the same part, in order that the two small bones which are shewn may be more distinctly seen.

- A The glands of the meatus auditorius, with its reticular body *in situ*.
- B The incus.
- C The malleus.
- D The osseous portion of the division of the mastoid sinusity, namely, that to which the shorter process of the Incus is connected.
- E The chorda tympani.
- F The membrana tympani, raised towards the inside, from the malleus.
- G The Eustachian tube.
- H The origin of the tube.
- I The end of the same.

FIGURE VI.

Shews the Malleus and its Processes, larger than nature.

- A That part of the head of the malleus, by which it is articulated with the incus.
- B The Handle.
- C The opposite part of the head of the malleus.
- D The processus minor.
- E The processus minimus.
- F The processus major; from which processes the handle is formed.

FIGURE VII.

Shews the Incus, and Os Orbiculare, larger than nature.

- G That part of the body of the incus which is articulated with the malleus.
- H The long process of the incus.
- I The os orbiculare, which is united to the extremity of the same long process.
- K The short process of the incus.

FIGURE VIII.

Represents the Stapes, and Membrane, by which its Base is fixed round the Fenestra Ovalis, also exceeding the natural size.

FIGURE IX.

Shews the Stapes, and Os Orbiculare, likewise the Base of the same Stapes, seen on its Internal and External surface;—all larger than nature.

- P The Stapes.
- Q The small head of the stapes, over the small cavity of which the os orbiculare is placed.
- R The internal surface of the base of the stapes, or that which looks towards the vestibulum, which is convex.

S The internal surface of the same base, or that which looks towards the crura of the stapes, which is concave.

FIGURE X.

Represents the Cavity of the Labyrinth entire, where it looks towards the Cerebrum.

- a The semicircular canals.
- b The vestibulum.
- c The foramina in the fornix of the vestibulum, for the entrance of the nerves;—five in number.
- d The canal of the cochlea.

FIGURE XI.

Represents the Semicircular Canals, on the part where they look towards the Cerebrum;—a little larger than nature.

- e The canalis major.
- f The canalis minor.
- g The common canal.
- h The canalis minimus.
- 1. The proper orifice of the canalis major.
- 2. The proper orifice of the canalis minor.
- 3. The common orifice.
- 4. The narrow orifice of the smallest canal.
- 5. The larger orifice of the same.

FIGURE XII.

Represents the Labyrinth where it looks towards the Cerebrum, in the same manner as in Figure X.; but prepared, by the removal of the upper part of the Vestibulum, in such a manner, that the Cavity of the Vestibulum itself, and in it the Orifices of the Canals of the Fenestra Ovalis, and also of the Scala Vestibuli, are all shewn *in situ*.

The Orifices of the Canals are not lettered, as they may be sufficiently known from Figure XI.

- i The fenestra ovalis, seen open in the bottom of the vestibulum.
- k The orifice of the scala vestibuli.

FIGURE XIII.

Shews the two Scalæ of the Cochlea, with their Progress and Orifices.

- l The orifice of the scala tympani, or the fenestra rotunda itself.
- m The orifice of the scala vestibuli.
- n The scala tympani.
- o The scala vestibuli.

FIGURE XIV.

Shews the Septum Cochleæ, and its two Substances.

- p Its harder substance, or lamina spiralis.
- q Its softer substance, or zona cochleæ.

FIGURE XV.

Represents the Portio Mollis of the Auditory Nerves, separated from the Bones of the Labyrinth.

FIGURE XVI.

Shews the Portio Mollis of the Auditory Nerves, and the Blood-vessels descending along with it from the Cerebrum into the Labyrinth; likewise the Expansion of the same Portio Mollis into the Membrana Vestibuli, and from thence into the Zones of the Semicircular Canals.

FIGURE XVII.

Represents the Right Os Petrosum of an adult entire, separated from the other adjacent Bones, and also from the pars squamosa; viewed from the internal posterior side,

side, which, anteriorly, forms the Camara, as it is commonly called, of the Cerebellum. In which view is seen the larger part, chiefly, of its inferior side.

a a a The superior angle, formed by the meeting of the internal sides, namely, of the posterior and superior; into which the anterior margin of the right tentorium of the dura mater is fixed. In this a furrow appears, inclosing the small venous sinus of the dura mater, which sinus is named the Petrosus Superior, and is discharged into the lateral sinus.

b The elevated portion of the upper side, under which is hid the superior semicircular canal. Figure XX. c.

c c The posterior side of the os petrosum.

d d That part imprinted in the os petrosum of the Fovea sigmoidea dextra, in which the right lateral sinus of the dura mater is lodged.

e e e The margin by which the os petrosum was united with the middle sides.

f The interior surface of the larger mammillary process.

g The smaller mammillary process, contiguous, on the inside, to the base of the larger.

h A furrow between the two processes, which gives origin to the digastric muscle of the under jaw.

i The styiform process.

k The orifice of the canal, by which the internal carotid enters the cavity of the cranium.

l l A furrow for the reception of the sinus of the dura mater, called Petrosus inferior.

m m A fissure contiguous to the fovea sigmoidea, in which the osseous part of the aqueduct of the vestibulum terminates.

n The foramen for the passage of the veins from the interior part of the os petrosum, to the dura mater.

o o The foramen auditorium for the entrance of the nerves of the seventh pair, from which the common canal of the nerves arising, is extended within the os petrosum.

1. The superior semi-canal, placed in the anterior surface of the common canal of the nerves.

2. The inferior semi-canal of the same surface.

3. The intermediate spine.

p p An osseous arch, forming the entrance of the inferior orifice of the aqueduct of the cochlea.

q A semi-canal, contiguous to the same inferior orifice of the aqueduct of the cochlea, through which the anterior portion of the nerve of the eighth pair is conveyed without the cranium.

r The foramen, through which the vena cochleæ passes out.

f The internal orifice of the canal, through which the trunk of the occipital vein empties itself into the lateral sinus.

t The external orifice of the same canal, to which the other remaining portion of the canal was joined in the os occipitis. For the occipital vein, in this subject, entered its canal by a foramen formed in the os occipitis.

u Some mastoid cells discovered, not in consequence of their being broken, but because, in this subject, these going beyond the limits of the os petrosum extended within the very middle of the annexed os occipitis.

x The superior margin of the furrow, by which the trunk of the ninth pair of nerves descends.

FIGURE XVIII.

Shews the Os Temporale of a Fœtus of nine months, entire, viewed from that part which looks to the Cavity of the Skull.

a The concave squamous portion.

b The extremity of the jugal process.

c c The pars petrosa.

d The orifice of the common canal of the nerves.

e The superior portion of the upper semicircular canal, which, in the fœtus, is distinctly elevated above the os petrosum.

f The superior portion of the posterior semicircular canal, which, in the fœtus, is in like manner frequently elevated.

g The osseous tube of the aqueductus vestibuli, Figure XX. h i.

h A cavity imprinted in the bone, receiving the extremity of the osseous tube of the aqueduct.

i A bristle introduced into the foramen of the aqueduct.

k A bristle introduced into the foramen of the vena vestibuli.

l l The entrance, or arched margin, of the inferior orifice of the aqueduct of the cochlea. Figure XVII. p p. Figure XX. k.

m A bristle introduced into the aqueduct.

n A foramen, which is the opening of the Fallopian aqueduct within the cranium, for the passage of a branch of the nervus durus to the Vidian canal, over the top of which there is an acute impending process of the bone, which shews the division of the foramen.

o Foramina which are observed in the internal surface of the os squamosum, over against the origin of the jugal process, for the passage of blood-vessels.

p A cavern under the superior semicircular canal, which is found in the fœtus, formed of a production of the dura mater, contributing in a wonderful manner to the vertical increase of this canal. This in the adult is contracted into a foramen. Vid. Fig. XVIII. n.

q The anterior wing of the upper side of the os petrosum covering the cœlum of the cavity of the tympanum.

r r The joining of this wing with the pars squamosa.

FIGURE XIX.

Represents part of the Left Os Petrosum of an adult, from which the Vestibulum and Canals are removed: The first circle only of the Cochlea is left open, and the Anterior part of the Bone is scraped off in such a manner, that the progress of the Aqueductus Vestibuli, and Vena Cochleæ is most distinctly seen.

a a The first circle of the cochlea opened longitudinally.

b b The aqueductus cochleæ open through its whole length.

c The osseous semi-canal contiguous to the inferior orifice of the aqueduct, likewise divided longitudinally, Figure XVII. p. Figure XX. n.

d d The descent of the vena cochleæ.

e The place, within the semi-canal, in which the osseous canal, which conveys the vein, terminates.

f The superior orifice of the aqueductus cochleæ, very near to the insertion of the vein.

g Two branches of the vena cochleæ, which emerge from the trunk, and begin to proceed through the first circle of the cochlea.

h Another branch of the same vein belonging to the vestibulum.

FIGURE XX.

This Figure shews the Right Labyrinth entire, with the common Canal of the Nerves, and Aqueducts, seen in situ on the part which looks to the Occiput, and laid open by the removal of the surrounding Bone. This Figure ought to be compared with Figure XVII. by which it will appear how each of the Parts of the Labyrinth within the Os Petrosum, represented in this Figure, are relatively placed.

a The orifice of the common canal of the nerves, Figure XVII. o o.

b The tuber under which part of the vestibulum and cochlea are hid.

c The superior semicircular canal, which was concealed under the tuber b b, Figure XVII.

d d The posterior semicircular canal.

* The place where the superior and posterior canal run into the common canal.

e Part of the exterior canal visible, in hoc situ.

f The common canal formed by the union of the superior and posterior.

g The first part of the aqueductus vestibuli, which is narrower than represented in the figure, in which the tube forming the aqueduct is left entire, and the surrounding bone therefore appears thicker.

h Part of the same aqueduct gradually increasing into a horn, and compressed in some places.

i The broad extremity of the osseous cornu of the aqueduct, corresponding to fissure, Figure XVII. m m.

k The arched entrance of the aqueduct of the cochlea corresponding to Figure XVII. p p.

l The

l The narrow part of the same aqueduct towards the scala tympani, going to the fenestra rotunda, which is much thicker than in proportion to the contained cavity, on account of the bone left around, as will appear by comparing this Figure with Figure XIX. b b.

m The inferior orifice of the aqueduct of the cochlea.

n The semi-canal descending through the anterior and inferior part of the above orifice, corresponding to Figure XVII. q.

o A small foramen, through which the vena cochleæ passes, corresponding to Figure XVII. r.

FIGURE XXI.

The same Labyrinth, which in the preceding Figure is viewed Posteriorly, is, in this Figure, shewn from the Anterior Part, where it is turned towards the Temple, but raised somewhat above its natural situation, that the other parts may be brought into view.

a The anterior part of the common canal of the nerves.

b Part of the superior semicircular canal seen in this view.

c The posterior semicircular canal.

d The exterior semicircular canal.

e The vestibulum around the fenestra ovalis, which is erased; the middle part of it only is seen, in which the following parts are found.

f The orifice of the common canal.

g The semi-oval cavity partially seen.

h A portion of the hemispheric cavity observable in this view.

i The intermediate spine.

k The pyramid of the vestibulum, indifferently represented.

l The orifice of the aqueductus vestibuli.

m The broad extremity of the same aqueduct, corresponding to Figure XX. h i.

n The circles of the cochlea.

o Part of the first circle of the cochlea, opened for some way from the vestibule, to obtain a view of the lamina spiralis and scalæ.

r. The scala vestibuli.

2. The scala tympani.

p The foramen, or superior orifice of the aqueduct of the cochlea, situated in the origin of the scala tympani, and occupying the centre of the small infundibulum.

q The remainder of the tube which forms this aqueduct, answering to Figure XX. k.

r Part of the spiral lamina, from which the white circle is removed, that in this position of the cochlea, the upper orifice of the aqueduct of the cochlea may appear.

s The place in which the second circle of the cochlea, drawn within the first, does not yet immediately adhere to it, but by the intervention of an osseous substance.

t The place of immediate accretion.

u The cupula, or fornix, of the apex of the cochlea.

FIGURE XXII.

Represents the Right Posterior Part only of the Internal Base of the Skull, still covered with the Dura Mater, in which the whole of the Os Petrosum, and Base of the Right Camara of the Occiput, is seen, with the Membranous Cavity of the Aqueductus Vestibuli opened, with the Lymphatic Veins which arise from it, and the Trunks of all the Nerves which go from the Brain, from the Third to the Ninth Pair.

A The right base of the middle cavity of the skull, in which the head of the posterior lobe of the brain is situated.

B The arteria meningeæ major, which entering the cavity of the skull by the spinous foramen of the os sphenoides, is distributed over the dura mater.

C Part of the dura mater hanging outward.

D Right portion of the fella equina.

E Right part of the base of the posterior camara of the skull, in which the right lobe of the cerebellum is situated.

F Another portion of the dura-mater turned outward.

G G The right half of the foramen magnum, through which the spinal marrow passes.

H The origin of the spinal marrow separated from the termination of the medulla oblongata, in which is seen part of the foramen which was contiguous to the fissure of the calamus scriptorius.

I The jugum semilunare, which arises in the posterior margin of the foramen magnum, when the head is pressed backward against the atlas.

K K The right portion of the falx cerebelli, in which are two remarkable folds.

L M The right lateral sinus of the dura mater opened, the tentorium being cut off.

N The inferior part of the longitudinal sinus contiguous with the right lateral sinus.

O Foramen, by which the longitudinal and right lateral sinus communicate with the left lateral sinus, and the inferior occipital sinus of *Santorinus*.

P P The remaining broader part of the lateral sinus descending behind the right os petrosum, covered with the dura mater.

Q The place under which is the extremity of the lateral sinus, terminated in the diverticulum of the jugular vein.

R The triangular orifice of the superior sinus petrosus, by which it communicates with the lateral sinus.

S The arteria meningeæ posterior of the dura mater.

T V The bare margins of the cut bone of the skull.

X The right vertebral artery cut off at its entrance into the skull.

a The right nerve of the third pair of nerves of the brain, which perforating the dura mater is conveyed to most of the muscles of the eye, &c.

b The nerve of the fourth pair, or patheticus, dispersed over the trochlearis muscle of the eye.

c c The nerve of the fifth pair.

d The orifice of the vaginal sinus of the dura mater, through which the trunk of the nerve of the fifth pair passes.

e The nerve of the sixth pair, which goes to the rectus externus muscle of the eye.

f The portio dura of the nerve of the seventh pair.

g The portio mollis of the same seventh pair.

1. The superior, and anterior fasciculus.

2. The middle fasciculus.

3. The superior and posterior fasciculus.

h h The orifice of the common canal of the nerves of the seventh pair.

i The anterior portion of the eighth pair, penetrating under the entrance of the inferior orifice of the aqueductus cochleæ.

k The arched entrance of the inferior orifice of the aqueductus cochleæ.

l The other fasciculus of the eighth pair.

m m The nervus accessorius of *Willis*.

n n n Its roots separated from the termination of the medulla oblongata.

* Another inferior root proceeding from the posterior part of the origin of the spinal marrow.

o The nerve of the ninth pair.

p p The superior angle of the os petrosum, from which the tentorium is dissected.

q q The elevation of the upper side of the os petrosum, under which is the superior semicircular canal. Figure XVII. b b.

r r The posterior side of the os petrosum, in which the aqueductus vestibuli terminates.

s The membranous cavity of the aqueductus vestibuli opened.

t t A chink, in which the osseous part of the aqueductus vestibuli terminates, and in the direction of which the first incision of the cavity is made. Figure XVII. m m. Figure XX. i.

u u The dissected sides of the membranous cavity turned back.

x x x x Small lymphatic veins, filled with quicksilver, arising from the membranous cavity of the aqueduct, and spread over the lateral sinus.

z z A small sinus in which the two inferior veins proceeding from the cavity of the aqueduct were united, in this subject, with other small veins of the dura mater.

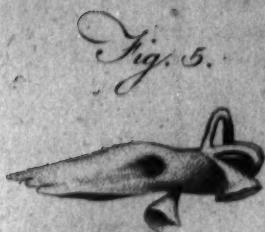
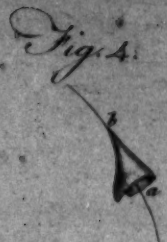


Fig. 9.

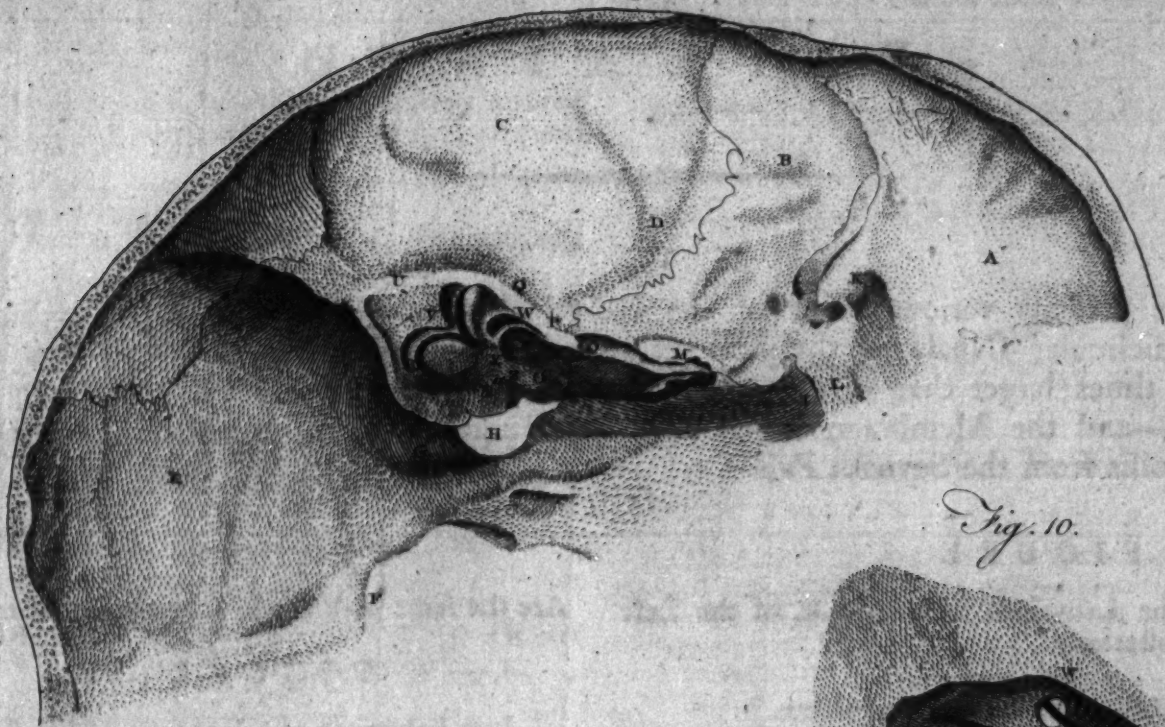


Fig. 10.

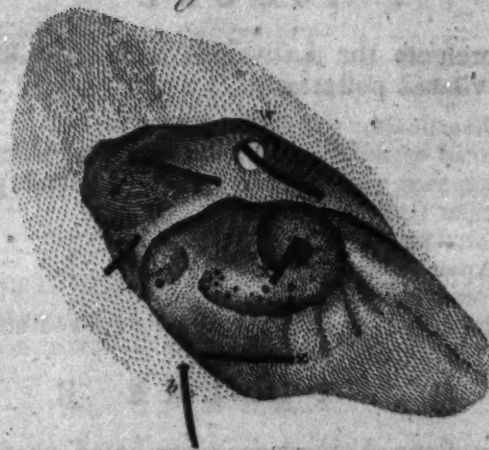


Fig. 11.



Fig. 16.

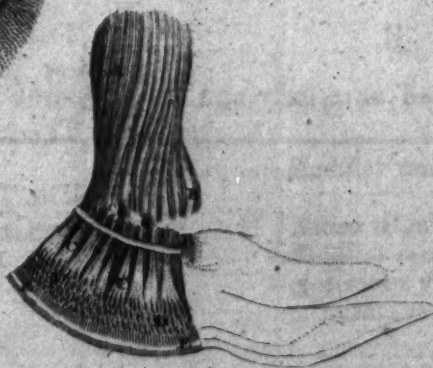


Fig. 12.



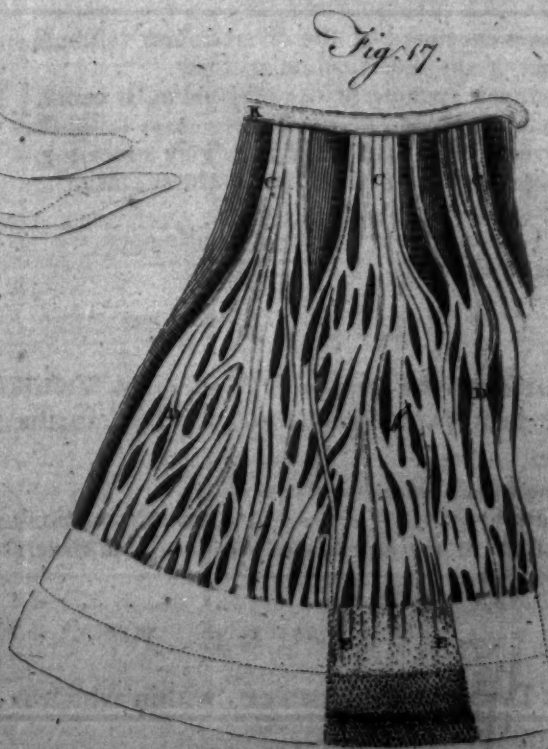
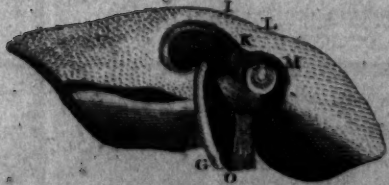
Fig. 14.



Fig. 15.



Fig. 13.



T H E

Thirty-seventh Anatomical Table

OF THE

H U M A N B O D Y

E X P L A I N E D.

THIS Table presents various views of the Labyrinth of the Human Ear;---the Superior and Posterior Semicircular Canals of the Ear cut open, &c.;---the bottom of the Meatus Auditorius Internus, six times larger than nature;---a Dissection of the Os Petrosum;---the Portio Dura and Mollis, &c.;---and the Membrane which lines the Human Cochlea, together with the Nerves of the Portio Mollis from the Seventh Pair.

FIGURE I.

Represents the Labyrinth of an Adult, of the Left Side, viewed posteriorly.

- d Diverticulum vestibuli.
- e Broad extremity of the diverticulum cochleæ.
- h Common portion of the superior k, and posterior i, perpendicular femicircular canals.
- l Horizontal femicircular canal.
- m Apex of the petra.
- n Foramen acousticum internum.
- o Narrow portion of the diverticulum vestibuli.

FIGURE II.

The same Labyrinth represented anteriorly and inferiorly.

- a Commencement of the diverticulum vestibuli,
- b And of the diverticulum cochleæ.
- c Common opening of the perpendicular canal.
- d Exterior portion of the diverticulum vestibuli.
- e Diverticulum cochleæ, now wholly appearing.
- f Origin of the spiral lamina of the cochlea.
- g Apex of the cochlea.
- h i k l As in Figure I. but the canals open.
- m As in Figure I.

FIGURE III.

Represents the entire Diverticulum Vestibuli of an Adult, seen posteriorly, into which a bristle is introduced.

- a The broad exterior portion of it.
- b Narrow origin of the opening into the vestibulum.
- c Portion of the introduced bristle visible through an artificial aperture.

FIGURE IV.

The Diverticulum Cochleæ, within which is a Bristle.

- a Broad inferior extremity.
- b Narrow origin.

PART III.

FIGURE V. VI.

Are the same with I. and II. only of the opposite side.

FIGURE VII.

Left Labyrinth of a Fœtus viewed posteriorly.

- d Beginning of the diverticulum vestibuli.
 - e Beginning of the diverticulum cochleæ.
- Other parts the same as in Figure I.

FIGURE VIII.

The same Labyrinth open on the Anterior and Inferior part; the Semicircular Canals shut; but their Mouths are distinct.

The letters indicate the same parts as in Figure II.

The Three following Figures represent the Semicircular Canals and Cochlea of the Left Ear, with the holes in the Bones for the passage of the Seventh Pair of Nerves.

FIGURE IX.

Represents the Inner part of the Left side of the Base of the Cranium, with the Canal for the Seventh Pair of Nerves, and the Superior and Posterior Semicircular Canals of the Ear cut open, viewed from the back-part of the opposite side of the Head.

- A The supra-orbital plate of the frontal bone.
- B The temporal wing of the sphenoid bone.
- C The inner side of the scale of the temporal bone.
- D The print made by the middle artery of the dura mater.
- E The hollow under part of the occipital bone, in which the left hemisphere of the cerebellum was lodged.
- F The foramen magnum of the os occipitis.
- G The print made by the lateral sinus.
- H The hole at which the left lateral sinus and the eighth pair of nerves go out.
- I The back of the posterior clinoid process of the sphenoid bone.
- K The anterior clinoid process.

R

L The

- L The cella Turcica.
 M The edge of the oval hole of the sphenoid bone for the inferior maxillary nerve.
 N The inner end of the os petrosum.
 O O The upper and under cut sides of the canal for the seventh pair, called, improperly, Meatus Auditorius Internus.
 P A bristle passed from the scala of the cochlea into the vestibule, and from the vestibule into the anterior end of the superior semicircular canal, Q.
 R The posterior semicircular canal cut open.
 S The common canal formed by the joining of the semicircular canals, Q and R, going into the vestibule.
 T The under end of the posterior semicircular canal going into the vestibule.
 U A bristle, the two ends of which are introduced into the external inferior horizontal semicircular canal.
 V A bristle put into a passage, which is open in the skeleton at its inner end, and which is situated about a quarter of an inch farther out than the hole for the seventh pair, then passes under the superior perpendicular semicircular canal, and terminates by a blind end within the os petrosum.
 W A bristle put into the beginning of the canal, for the portio dura.
 X A bristle put into a hole in the central pillar, or modiolus of the cochlea, through which a principal branch of the portio mollis enters.
 Y Z Principal holes, through which branches of the portio mollis pass to the vestibule.
 a The hole for the aqueduct from the cochlea, described by Cotunnus.
 b The hole said by Cotunnus to transmit an aqueduct from the vestibule.

FIGURE X.

Represents the bottom of the Meatus Auditorius Internus, or Canal for the Seventh Pair of Nerves, as it appears when magnified to about six diameters.

- W X Y Z Point out the same parts as in Figure IX.
 c c Indicate a cribriform plate through which the other nerves of the cochlea pass.
 d e Shew cribriform parts through which the other nerves to the vestibule pass, and from it to the semicircular canals.

FIGURE XI.

Represents the Os Petrosum dissected, so as to shew the Cochlea and Semicircular Canals, with the Passages for the Nerves, viewed from the fore and outer side of the Head.

- A The cella Turcica.
 B The posterior clinoid process.
 C The anterior clinoid process.
 D The round hole in the sphenoid bone for the passage of the second branch of the fifth pair.
 E The oval hole for the passage of the third branch of the fifth pair.
 F The hole for the largest artery of the dura mater.
 G The suture which divides the temporal bone H, from the sphenoid.
 I The inner end of the os petrosum.
 K The canal for the internal carotid artery.
 L A hole cut to shew the beginning of the canal for the carotid artery.
 M N The outer or osseous end of the Eustachian tube laid open.
 O A bristle passed into the first turn of the posterior scala of the cochlea, which is cut open, and from it into the foramen rotundum. The diameter of the modiolus is seen here.
 P Q U V W X Point out the same parts as in Figures IX. & X. shews the second turn of the cochlea and its apex laid open. The osseous part of the modiolus terminates in the second turn of the cochlea.
 s The cavity of the tympanum cut open.
 t A probe put from the cavity of the tympanum into the foramen ovale.
 v A probe put from the cavity of the tympanum into the foramen rotundum.

FIGURES XII. XIII.

Shew the Portio Dura and Mollis, with the Membrane of the Cochlea, separated from the Bone s which cover them.

FIG. XII.

- G The portio dura, turned to the outer side, so as to shew fully I K L, the half sheath of the portio mollis, in which the portio dura was lodged.
 I The inner side, or branch of the portio mollis, ending in M, the membrane of the cochlea, the turns and apex of which are seen distinctly.
 K The outer side, or branch of the portio mollis, which terminates in N the vestibule.
 L A thin middle portion, by which these two sides or branches are joined together.
 O A small thread which seems to be nervous, and which joins the portio dura to the outer side of the portio mollis.

FIG. XIII.

Represents the same parts as the preceding Figure, and they are distinguished by the same letters; but with this difference, that the Trunk of the Portio Mollis is turned forwards, so as to shew the under part of I K L.

FIGURE XIV.

Represents the Membrane of the Cochlea, and the Branch of the Portio Mollis sent to it, of their natural size.

FIGURE XV.

Represents the same parts magnified to six diameters.

- A The branch of the portio mollis which is sent to the cochlea, composed of many bundles of threads.
 B B Part of it lacerated by the shaking of the preparation in the liquor in which it had been preserved, for upwards of twenty years before a drawing of it was made.
 C Some of the fasciculi running upon the membrane at the first turn of the cochlea.
 D E F The double edge of the membrane of the different turns of the cochlea.
 G The apex of the cochlea.
 H A large branch of the nerve which passes through the centre of the modiolus, and from that is continued to the apex of the cochlea, where it forms a circle I.

FIGURE XVI.

Represents part of the Branches of the Portio Mollis, distributed on the first turn of the Cochlea, magnified to six diameters.

FIGURE XVII.

Represents some of the Branches in Figure XVI. magnified to about thirty diameters. In both Figures, similar parts are distinguished by the same letters.

- A The trunk of the branch of the portio mollis, which supplies the cochlea.
 B B Part of it lacerated.
 C C The fasciculi of nervous fibres, disposed in a regular manner, and beginning to spread out on the membrane of the cochlea.
 D D An elegant plexus, which they form.
 E E F F The plexus continued; but the structure and connection of parts is seen here much less distinctly, not only from the nerves dividing into much smaller parts, but that these, with the membrane, become suddenly much less white, or more pellucid.
 G The edge of the membrane of the cochlea which is the most distant from the root of the lamina spiralis.

T H E

Fig. 1.



Fig. 5.



Fig. 2.

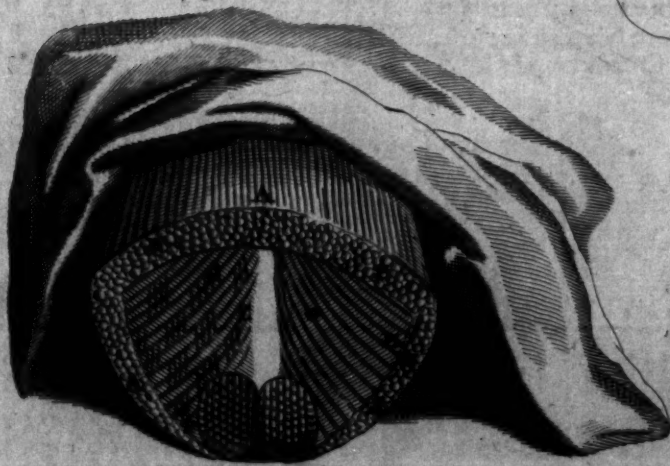
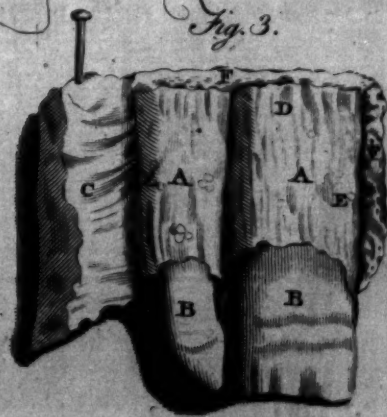


Fig. 4.



Fig. 3.



T H E

Thirty-eighth Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

FIGURE I.

THE External parts of the Nose, with the Tongue, Fauces, Uvula, &c. in situ.

- A The back of the nose.
- B The spine.
- C The tip.
- D The septum narium, or bridge.
- E The alæ nasi, or sides of the nose.
- F F F The cheeks divided, that the parts within the mouth may appear.
- G The tongue.
- H The uvula, in situ, covered with the glandular membrane of the palate.
- I The tonsil.
- K K The gums of both jaws.
- L L The palate, or roof of the mouth.
- M The upper part of the epiglottis, raised by the depression of the tongue.

FIGURE II.

The Muscular Structure of the Tongue.

- A A A The external order of longitudinal fibres, extending from the base to the tip of the tongue. Between these, numerous glands and lobes of fat, B B B, are found interspersed.
- C D The second order of the fibres of the tongue, which descend from the upper part to its base.
- E F Other fibres arising from the base, and going to the surface of the tongue.
- G H Others going from the middle of the tongue to its sides. The tendinous extremities of these fibres are fixed to the teguments of the tongue. At the middle of the lower part of the

tongue, are two distinct classes of fibres, very intricately disposed, which contribute to those various motions of which the tongue is capable.

FIGURE III.

The structure of the Gums, magnified by a Microscope.

- A A Part of the gums.
- B B Two of the fore-teeth.
- C The tegument of the gums raised.
- D The ducts of the fibres.
- E E The glands situated between the fibres.
- F F Part of the upper jaw broken off.

FIGURE IV.

The Inner Surface of the Membrane of the Palate, as it appears when raised and viewed by a Microscope.

- A A The tunica palatina raised from the bone, and extended by pins.
- C C D D The glands and fleshy fibres which form the membrane.
- E E Two dentes incisores.
- F Part of the osseous palate, the surface of which is covered with impressions from the adhesion of the tunica palati.

FIGURE V.

The External Surface of one of the Glandulæ Tonsillæ or Amygdalæ, on which many large Foramina of its Excretory Ducts appear, by which its Pituitous Matter, which mixes with the Food in its descent to the Gula, is discharged into the Fauces.

T H E

T H E

Thirty-ninth Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

FIGURE I.

VARIOUS Muscles of the Tongue, Os Hyoides, and Larynx, appearing in situ, the side of the Jaw being removed.

- A A B The tongue pinned up, B.
 C The musculus stylo-glossus, in situ. Arising from the processus styloides, it is inserted into the root of the tongue, immediately below the insertion of the cerato-glossus. It draws the tongue upwards and inwards in the action of deglutition.
 D D The musculus cerato-glossus; arising fleshy from the cornua of the os hyoides, and is thus inserted into the tongue. When this acts along with its partner, they draw the tongue directly into the mouth;—when one only acts, it pulls the tongue to one side.
 E F G I The musculus genio-glossus, in situ. It arises from the middle of the internal part of the lower jaw, and is inserted into the root of the tongue. When this acts along with its partner, the tongue is drawn forwards, and thrust out of the mouth.
 H Part of the fauces agreeing to the root of the tongue.
 L Part of the coraco-hyoideus.
 M The stylo-cerato-hyoideus muscle.
 N The mylo-hyoideus muscle, cut from its origin at the internal part of the under jaw-bone, and left at its insertion into the middle and upper part of the os hyoides.
 O The genio-hyoideus muscle, *in situ*.
 P The middle part of the under jaw-bone, which forms the chin, broken off.
 Q The internal surface of the upper lip.
 R The inside of the cheek.
 S The nervus gustatorius, which is a branch of the fifth pair of nerves in its way to the tongue.
 T The nervus linguae motorius, arising from the ninth pair of the brain.

- t A small branch of the ninth pair going to the larynx.
 V The left cornu of the os hyoides.
 W The trunk of the carotid artery.
 X X The digastric muscle, left at its origin from the mastoid process.

FIGURE II.

The Internal Surface of the Upper Jaw, the Under Jaw being removed.

- A The roof of the mouth, or palate.
 B B The glandular membrane of the fauces, near the tonsillae.
 C C Various foramina in the surface of the glandular membrane of the mouth, or palate, through which issues a liquor secreted by its glands;—expressed in Figure III. B B C C.
 D E The anterior part of the palate, near the dentes incisores, where the bone underneath is perforated for the trans-mission of various blood-vessels and nerves.
 F F A probe passed through the left nostril into the fauces.
 G The uvula hanging down from the palate.
 H The glandular membrane, which contributes to the formation of the posterior part of the fauces.
 I I Part of the flexores capitis muscles.
 K K Portion of the longi capitis.
 L L Vertebra of the neck.

FIGURE III.

The Foramina narium opened, by removing a large share of the Osseous Palate.

- A A B B The pituitary, or glandular membrane, which invests the foramen of the left nostril, separated from the septum narium, B.
 C C The glandular membrane extended by the probe D D.

T H E

Fig. 1.

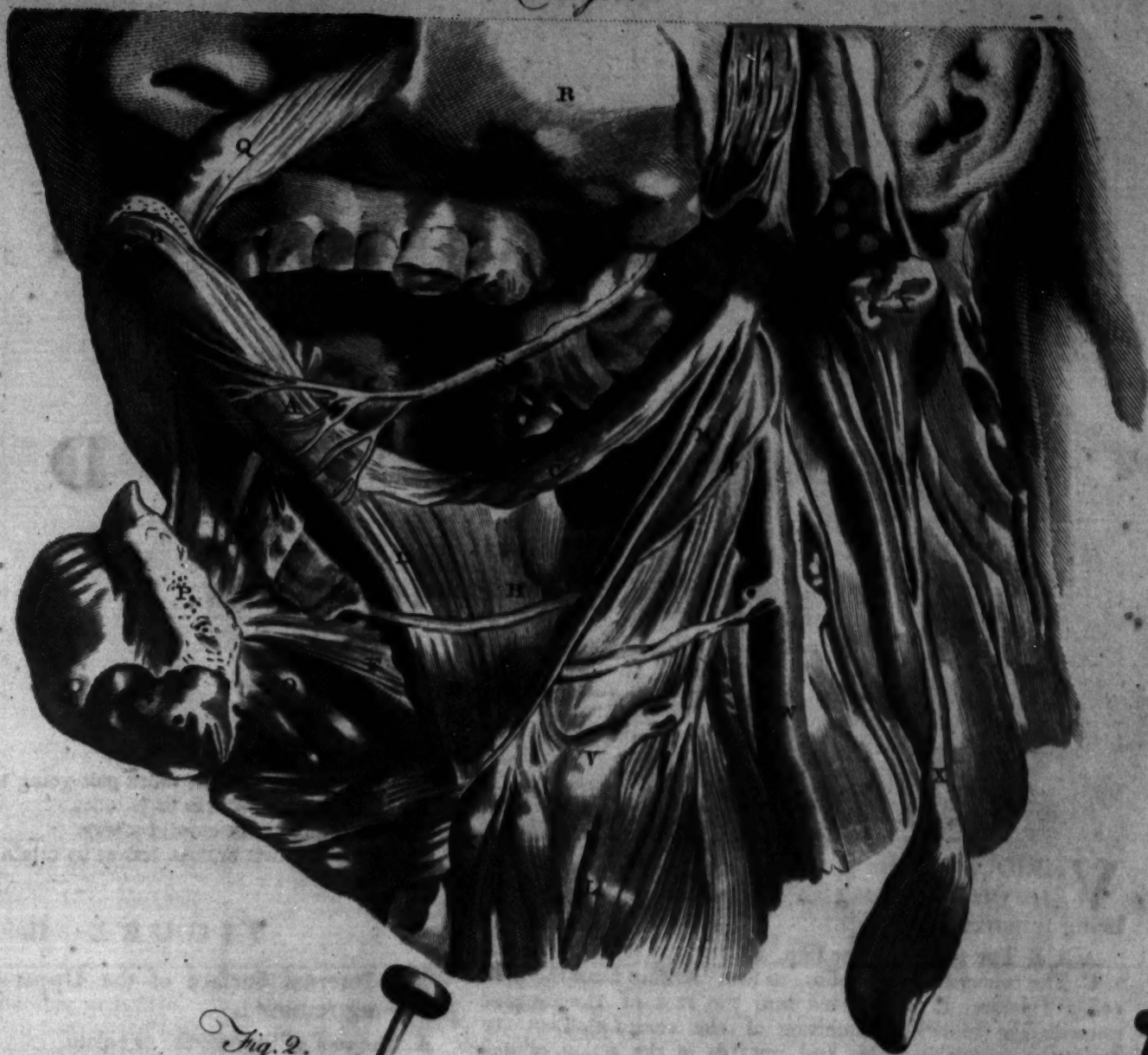


Fig. 2.

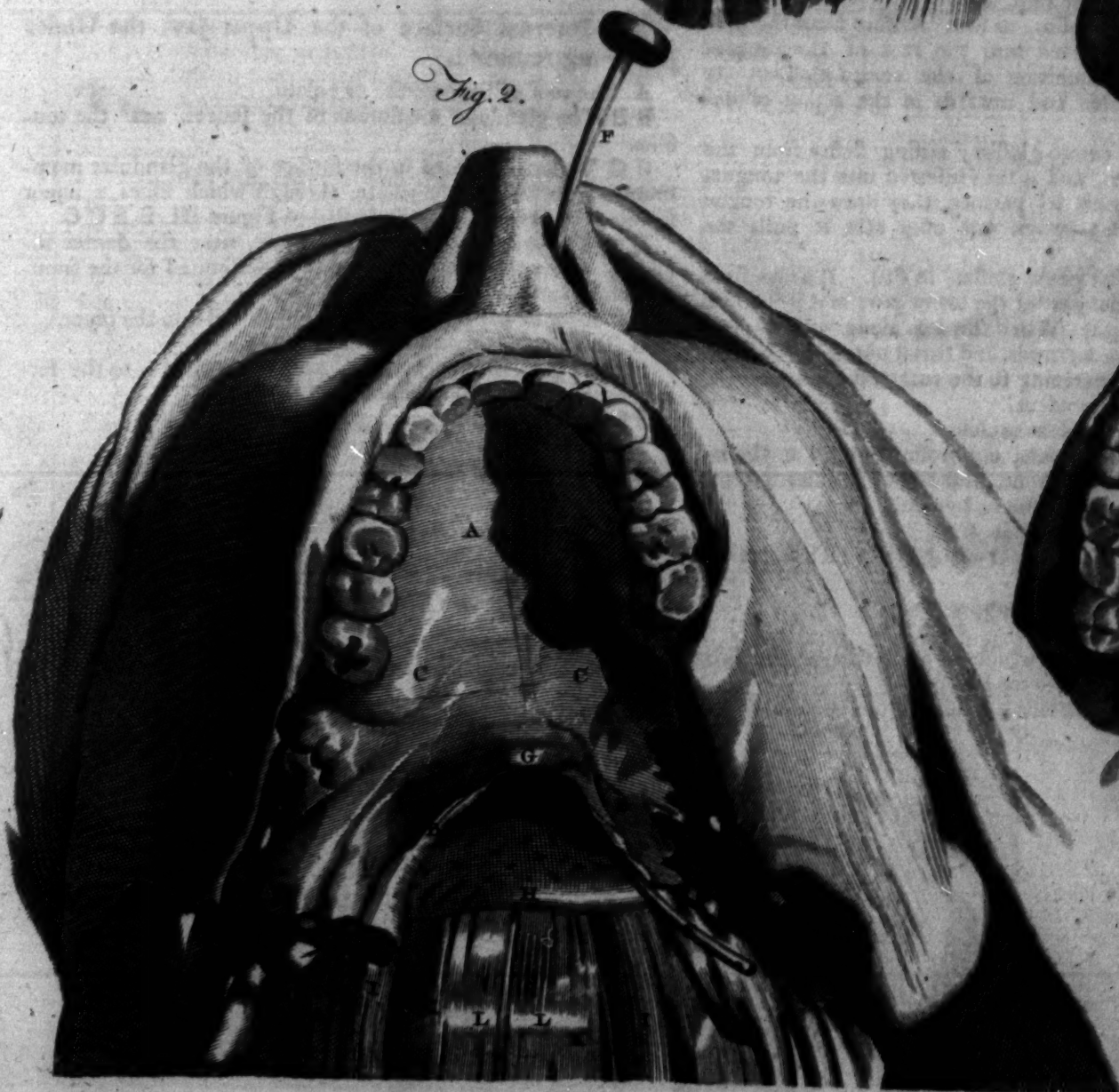
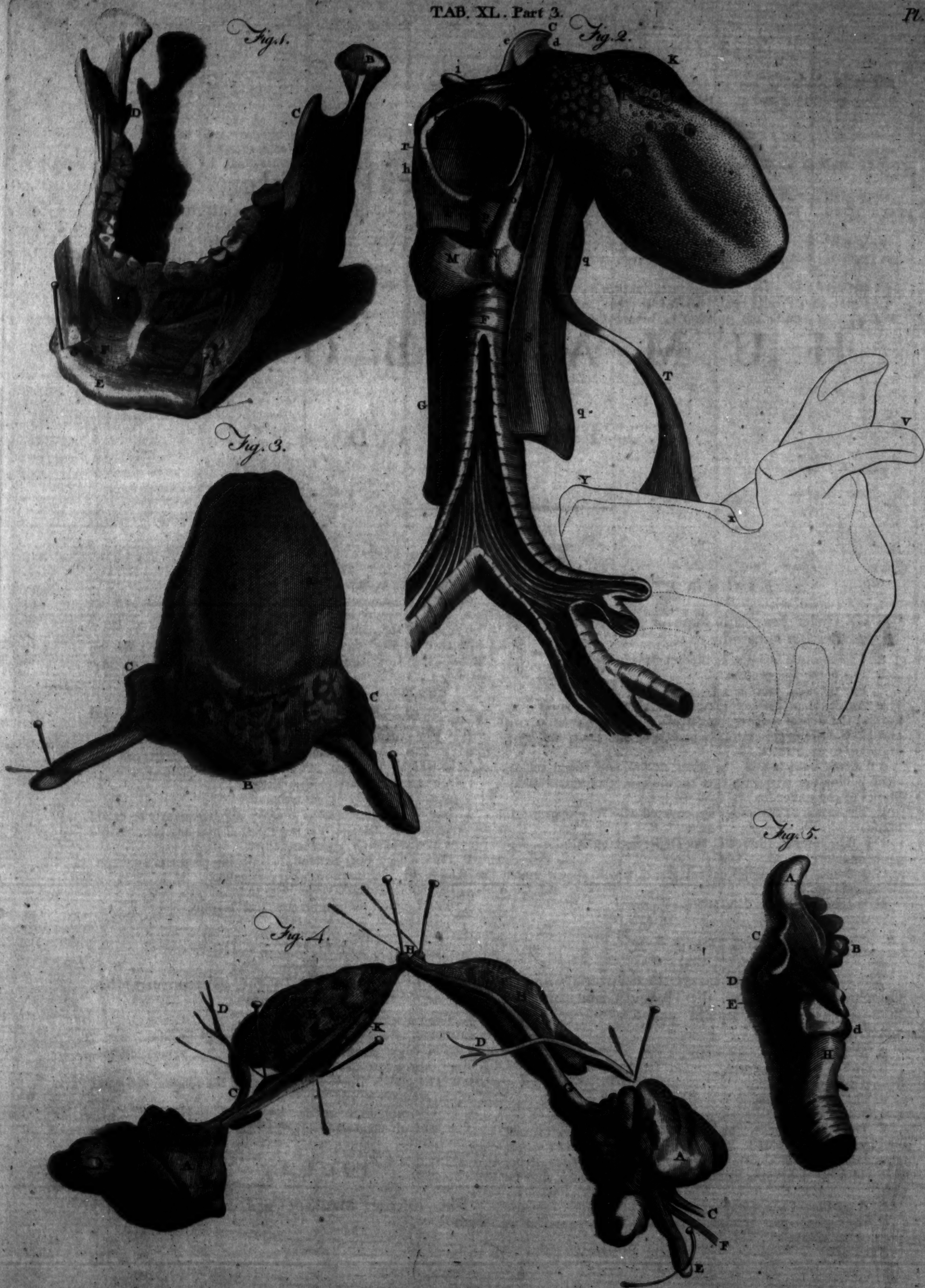


Fig. 3.





T H E

Fortieth Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

FIGURE I.

THE Under Jaw, with some of the Muscles of the Under Lip remaining to it.

- A The external left-side of the bone made bare.
- B The condyloid process.
- C The coronoid process.
- D An acute process on the internal part of the lower jaw, beyond the dentes molares, under which the trunks of nerves and blood-vessels pass into the middle of the bone, and give branches to each tooth.
- d d Some branches of the same nerves and blood-vessels, again passing out of the bone, to the muscles, glands, and membranes of the under lip.
- E The inside of the under lip, covered with its proper membrane.
- F F The internal surface of the Depressor labii inferioris proprius muscle.
- G G Some of the small salivary glands which appear under the membrane E.
- H H The Elevatores labii inferioris proprii.

- i One of the cornua of the os hyoides.
- K The tongue, and glandular expansion spread over its root, at the anterior limits of which expansion,
- l A sort of foramen cæcum is commonly found.
- M One of the lobes of the thyroid gland.—In order to explain the three muscles, the other is not brought into view.
- N The isthmus, as it is called, of the same gland.
- o The appendix of this gland, extending upward, as was the case in this subject.
- P P The crico-thyroid, or thyro-cricoid muscles.
- q q q The sterno-thyroid muscles, the greater part of the right of which is dissected away.
- r One of the hyo-thyroid muscles.
- S One of the sterno-hyoid muscles.
- T One of the coraco-hyoid muscles also, frequently so called by Anatomists, although it is not inserted into any part of that process of the scapula which is called
- V Coracoides; but, beyond the opening of the same scapula, which, by Vesalius and others, is called
- x The semi-circular-like process, inserted into
- Y The superior margin of the same scapula.

FIGURE II.

The Larynx, and Trachea, or Aspera Arteria, with the Oesophagus, and Tongue, the Thyroid Gland, and outlines of one of the Scapulæ, almost all viewed anteriorly.

- A A The cartilago scutiformis.
- b One of its prominences.
- C The epiglottis.
- d The middle ligament of the same.
- e One of its lateral ligaments.
- F The arteria trachea, and a part of the bronchia, opened longitudinally, that their long internal branches, and the gaping excretory orifices of the glands situated between these, and which are delineated Table XLII. Figure II. o o o, may be seen.
- G A portion of the oesophagus;
- h The superior part of which, or pharynx, is expressed as far as is necessary.

FIGURE III.

The upper part of the Tongue, as it appears when taken out with its proper Muscles.

- A The tip of the tongue.
- B Its root, freed from the epiglottis and os hyoides.
- a a The villous-nervous bodies of the tongue, placed obliquely from the apex to the root of the tongue.
- b b The glands situated at the root of the tongue, the pores of which emit the saliva.
- C C The musculi hyo-glossi.

The musculi stylo-glossi are shewn extended by pins.

FIGURE IV.

The Inferior Maxillary, and Sublingual Salivary Glands.

A A The

PART III.

I

S

A A The two inferior maxillary glands, formed of various lobes, inclosed in one membrane.

B B The sublingual glands, covered with their common membrane.

C C The trunks of the two arteries which arise from the carotids, and convey blood into the above-mentioned salivary glands.

D D Two branches of arteries arising from these trunks, which go to the tongue.

E The trunk of the vein arising from the extremities of the arteries of these glands, and those of the adjacent parts.

F A branch of the fifth pair of nerves.

G G The salivary ducts of the inferior maxillary glands, as they pass to their two papillary terminations under the tongue.

H The two above-mentioned papillæ, where the excretory ducts of the sublingual glands also empty themselves at the same pores with the two salivary ducts.

I The salivary duct of the right-side, opened longitudinally, and expanded.

K A small stone, of a bright yellow colour, as it appeared lying in the above duct. The smaller end of it was broken off in dissection, as here represented.

FIGURE V.

The Larynx, or upper part of the Trachea, after the Scutiform cartilage is taken off;—viewed laterally.

A The epiglottis.

B Its root cut from the tongue.

C The arytenoid cartilage.

D The posterior part of the cricoid, or annular cartilage.

d The anterior portion, which appears immediately under the thyroid.

E The musculus Crico-arytenoideus posticus.

F The thyro-arytenoideus, freed from the scutiform cartilage, and left at its insertion into the arytenoid cartilage, laterally.

G The crico-arytenoideus lateralis. It arises from the cricoid cartilage, and is inserted into the arytenoides. It assists, with its partners, in opening the glottis, or arytenoid cartilages.

H Beginning of the trachea.

THE

Fig. 1.



Fig. 2.



Fig. 3.

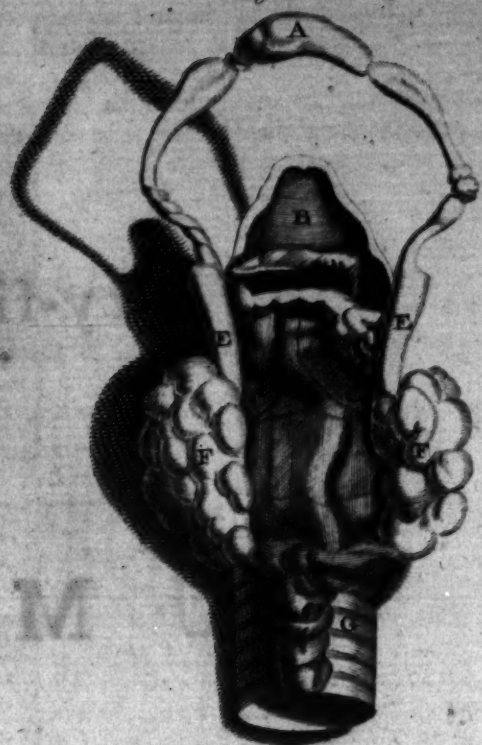
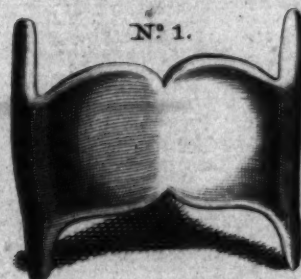


Fig. 4.



Nº 1.



2

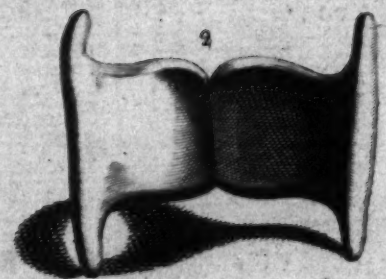
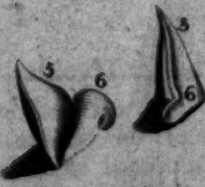
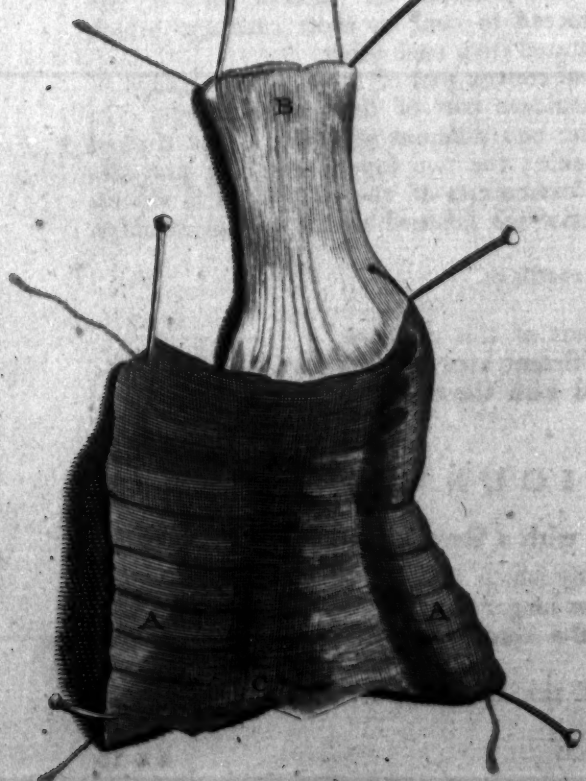


Fig. 6.



Fig. 5.



T H E

Forty-first Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

FIGURE I.

THE Anterior part of the Larynx, and Arteria Aspera, with the common Muscles of the Larynx, &c.

A B The sterno-hyoideus muscle not well expressed, it being here delineated as it were contiguous to the hyo-thyroideus C E.

D The os hyoides turned to one side.

F The superior and anterior portion of the Epiglottis, *in situ*.

G The anterior portion of the scutiform cartilage.

H H The crico-thyroidei muscles on the left-side; one of them hanging down from its origin, the other remaining *in situ*.

I O The anterior part of the annular cartilage laid bare.

FIGURE II.

The Os Hyoides, with the Anterior part of the Cartilages which form the Larynx, and part of the Aspera Arteria.

A The external and convex part of the scutiform cartilage.

B The internal and concave part of the os hyoides, which part of it necessarily comes in view in this position.

C The annular cartilage.

D The epiglottis expressed with the internal concave part forwards, as is well represented in the following Figure. Here, however, its external and convex part should have been shewn, as in Figure I, F.

E Part of the aspera arteria.

F F The thyroid gland.

G G Two long processes of the thyroid or scutiform cartilage tied to the extremities of the os hyoides.

FIGURE III.

The Os Hyoides, and Posterior Part of the Larynx.

A The external convex part of the os hyoides. This bone of the tongue appears, from the preceding Figure, to be composed of three bones. The middle bone A, is joined

to one of the extremities of the two lateral bones, by a cartilaginous interposition; the two other extremities of these lateral bones are tied to the two long extremities of the processes of the thyroid cartilage G G, Figure II. by a ligament.

B The internal concave part of the epiglottis next the glottis.

C C The arytenoid cartilages covered with the glottis, or internal membrane of the œsophagus.

D The cricoid cartilage, covered with the internal membrane of the œsophagus, which forms the glottis.

E E The two sides, or back-part of the thyroid cartilage, which give origin to part of the pharynx.

F F The posterior part of the thyroid gland.

G The posterior part of the trachea, where it is membranous, and receives the anterior part of the œsophagus in its way to the stomach.

Having examined the anterior and posterior parts of the whole larynx, we proceed to consider those cartilages which compose it when separated from each other.

No. 1. The external convex part of the thyroid cartilage.

2. The internal concave part of the same cartilage. In these two Figures, the two different processes of the thyroid cartilage, are remarkable; the two superior, or long processes are joined with the extremities of the os hyoides G G, Figure II. the two inferior are fastened to the cricoid cartilage, laterally.

3. 4. The cricoid cartilage.

3. The anterior,

4. The posterior part of this cartilage.

5. 6. 5. 6. Two different views of the arytenoid cartilages, which are articulated with the superior parts of the cricoid cartilage.

FIGURE IV.

The Larynx, with a Portion of the Trachea.

A The epiglottis, by which the whole larynx is suspended, which makes it appear longer than nature.

B That part of the epiglottis cut from the root of the tongue.

C C The sides of the scutiform cartilage separated from each other.

a a Its

- a a Its superior long processes fixed to the extremities of the os hyoides.
 b One of its two inferior short processes adhering to the annular cartilage.
 c One of the arytenoid cartilages, (which form the rimula of the larynx), covered by the glottis.
 d d The annular cartilage.
 D A portion of the trachea.
 E The membranous part of the trachea which touches the œsophagus in its descent to the stomach.
 e The crico-arytenoideus posticus muscle.
 f The crico-arytenoideus lateralis.
 g The crico-arytenoideus arising from the internal concave part of the thyroid cartilage, and inserted into the back-part of the arytenoid cartilage, above the insertion of the crico-arytenoideus lateralis.

FIGURE V.

A Portion of the Trachea opened and pinned out, to shew its Internal Surface.

A. Its cartilages divided longitudinally.

B Its internal membrane formed of longitudinal fibres, raised. This draws the cartilages nearer each other; and shortens the trachea.

C The transverse series of fibres lying on the membranous part of the trachea next the œsophagus. These pull the extremities of the cartilages of the trachea nearer each other, whereby they strengthen its canal.

FIGURE VI.

The Posterior Parts of the Muscles of the Pharynx and Œsophagus.

- A A A That part which forms the pharynx.
 B B The pterygo-pharyngæus muscle.
 C C The tonsillæ.
 D D The stylo-pharyngei muscles, which draw the fauces upwards, and dilate them.
 E E The inferior constrictor of the pharynx.
 F Part of the superior long processes of the scutiform cartilage, from whence the last-mentioned muscle partly arises.
 G The œsophagus.

THE

Fig. 2.

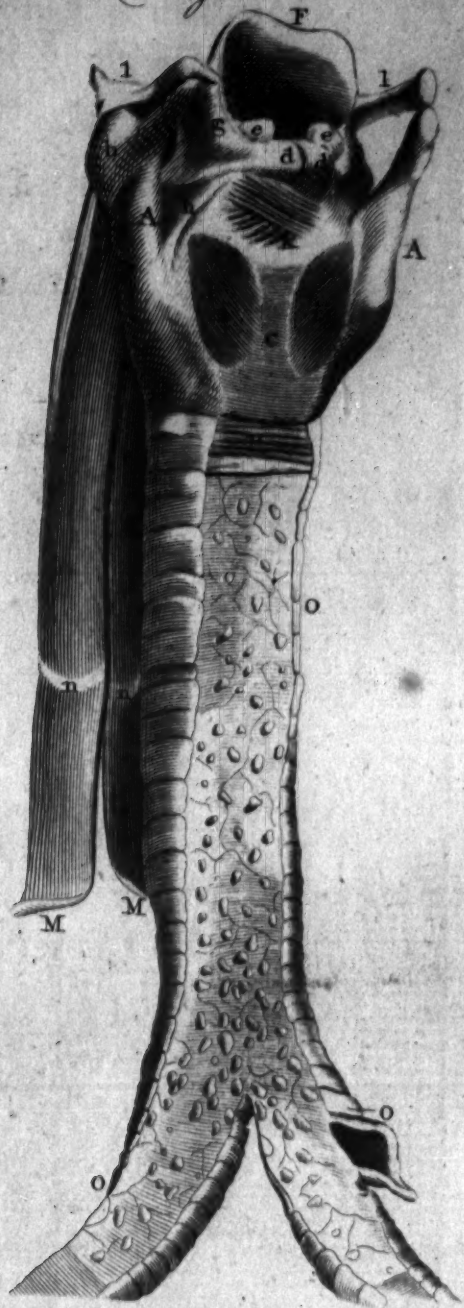


Fig. 1.

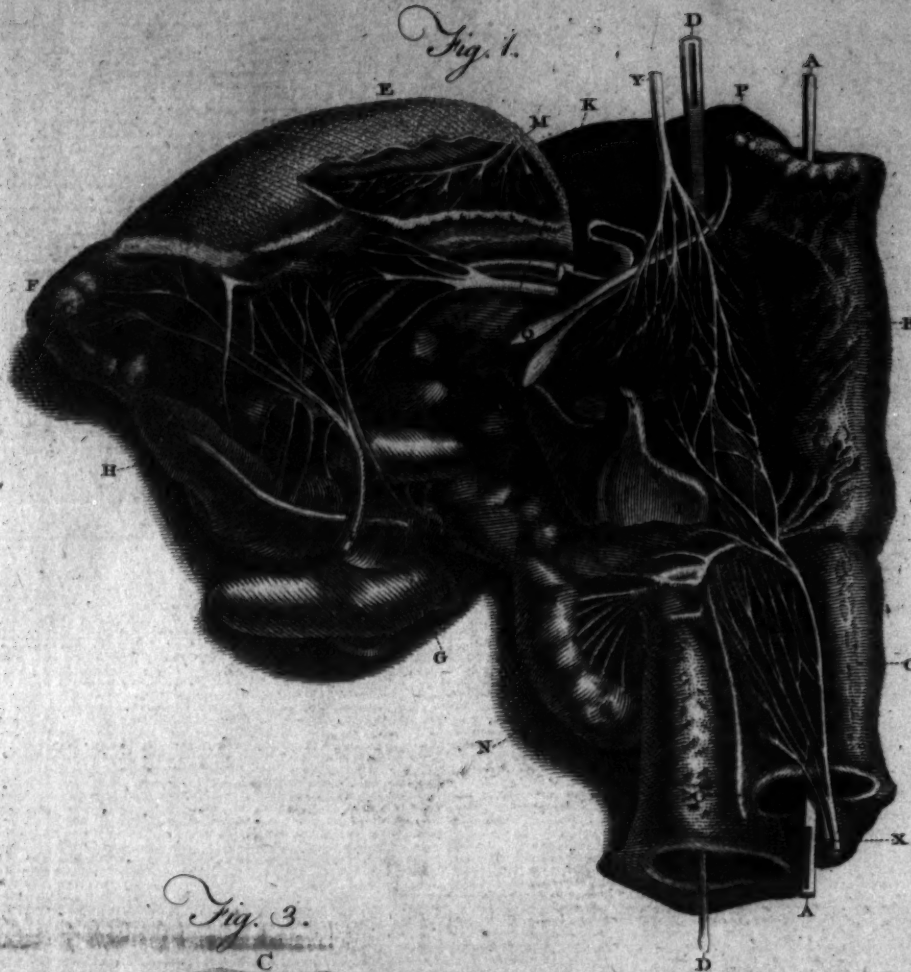


Fig. 3.

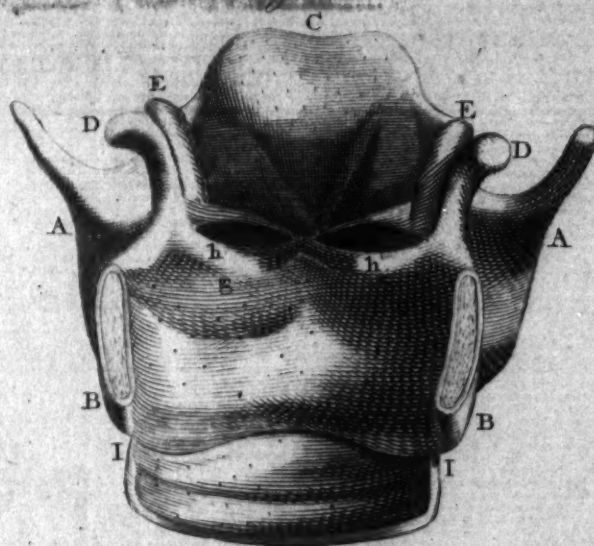


Fig. 6.



Fig. 4.



Fig. 5.



Fig. 7.

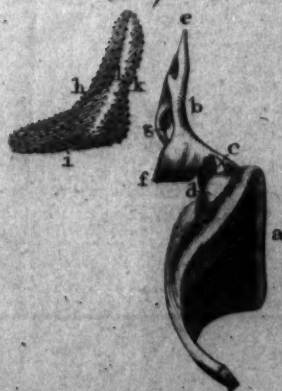


Fig. 8.



T H E

Forty-second Anatomical Table

OF THE

HUMAN BODY

EXPLAINED.

FIGURE I.

T HIS Figure is chiefly intended to shew a Plexus formed by the joining of the Recurrent Nerves with the Superior Laryngeal, and the termination of their Branches in the Muscles and Ligaments of the Larynx. The Nerves of the tongue are likewise delineated.

A A A probe passed through the pharynx B, and œsophagus C.

D D A probe passed through the larynx and the trachea.

E F The dorsum and apex of the tongue.

G H The inferior maxillary gland and its duct, and the sublingual gland.

I The lingual branch of the third branch of the fifth pair of nerves.

K The lingual branch of the ninth pair, and lingual artery.

L A small plexus formed by the joining of the fifth with the ninth pair.

M The lingual branch of the eighth pair.

N Part of the gland, commonly, but improperly, called Thyroid.

O The inferior thyroideal artery.

P The cornu of the os hyoides.

Q The base or anterior part of the os hyoides.

R The epiglottis.

S The thyroid cartilage drawn downwards, after cutting the ligaments which tie it to the os hyoides.

T The posterior and inferior corner of the thyroid cartilage, articulated with the cricoid cartilage.

U A bristle passed under the musculus crico-arytenoideus posticus.

V A bristle passed under the musculus crico-arytenoideus lateralis. Immediately above V, the musculus thyro-arytenoideus is seen obscurely.

W A bristle passed through the musculus arytenoideus transversus.

X The recurrent nerve.

Y The superior laryngeal nerve.

Z A plexus formed by the joining of the recurrent and superior laryngeal nerves, from which branches are sent off to each of the muscles, and also to the proper ligaments of the larynx or glottis vera.

The recurrent and superior laryngeal nerves, by being macerated at the time of drawing, appeared much larger to the painter than they are in a recent subject.

PART III.

FIGURE II.

Shews the Larynx and some of its Muscles, also the Musculi Sterno-hyoidei, and Trachea Arteria, with the First Bronchia, and some of their Glands and Fibres, all viewed posteriorly.

A A The scutiform cartilage.

b One of its prominences, the other of which is shewn, Table XL. Figure II. d.

C The cricoid cartilage.

d d The apices of the superior processes of the two arytenoid cartilages.

e e The upper part of each of the arytenoid glands.

F The epiglottis.

g The top of one of the ventricles of the larynx, as it appeared in this subject. The appendages of the ventricles are in some of a larger, and in others of a smaller size, which accounts for the variety of tone in different voices.

h One of the musculi thyro-arytenoidei, occupying the lower region of the same ventricle, which is partly brought into view by the removal of the musculus crico-arytenoideus lateralis.

i i The musculi crico-arytenoidei postici.

k The posterior or exterior arytenoid fibres.

l l The os hyoides.

M M The musculi sterno-hyoidei.

n n Their tendinous impressions, or aponeurosis.

O O O A large portion of the trachea arteria, where the rings terminate, and of the first bronchia into which it is divided, stripped of the external coat, that the glands immediately underneath and their blood-vessels may appear. Their excretory orifices are described, Table XI. Figure II. letter F. On the top of the trachea, that coat is separated, and pulled downwards, in order that the internal

p Transverse fleshy fibres may be seen.

FIGURE III.

Shews the Larynx divided posteriorly in a longitudinal direction, and expanded, that the various Internal Parts may be seen.

A A The scutiform cartilage.

B B The cricoid cartilage, in the sections of which small cells are seen.

T

C The

C The epiglottis.
 D D The arytenoid cartilages.
 E E The long crura of the arytenoid glands: The shorter crura lie under the following ligaments.
 f f g g The superior and inferior ligaments, by which the arytenoides and thyroids are connected with each other.
 h h The orifices of the ventricles of the larynx.
 I I The first cartilage of the trachea arteria. The excretory orifices of the subjacent glands are seen in the coat which covers both this and the following cartilage, and likewise the cricoid, epiglottis, &c.

FIGURE IV.

Is a part of the preceding Figure inclined forward; the Epiglottis being pulled down and turned back, that the Orifices of the Ventricles being thus dilated, the Origins of their Appendages a a, may be brought into view.

FIGURE V.

Shews the size and Figure of the Left Ventricle of the Larynx.

FIGURE VI.

Shews the Epiglottis dissected through the middle, nearly in a longitudinal direction, in order that all the parts given in Figure IV. may be seen in this Section.

a The concave superior, or interior surface of the epiglottis, perforated with excretory orifices.

b The substance of the same cartilage perforated with these small foramina, or tubes, and also with larger apertures, and with these hollows on each excavated and corroded-like surface, which are mentioned in Figure IV.

c c The gland of the epiglottis extended over both its surfaces, situated in the above-mentioned hollows, and transmitted by these openings to both sides.

FIGURE VII.

Represents one of the Articulations of the Cricoid with the Arytenoid, likewise its Cavities, and one of the Arytenoid Glands, &c.

a The right portion of the cricoid viewed anteriorly, and dissected perpendicularly through the middle.

b Also the right arytenoid, which is inclined outward and backward, in order that

c Its sinus may be seen, by means of which, and

d Its small head bunching out in the cricoid, its articulation is formed.

e The superior arytenoid process.

f The inferior process of the same.

g One of the cavities in the anterior surface of the arytenoid, in the deep posterior part of which is situated

h The arytenoid gland, which is here represented detached.

i The shorter crus of the arytenoid gland.

k The longer crus of the same.

l A small pillar extending along this crus.

FIGURE VIII.

The Posterior Surface of the Larynx.

a The epiglottis.

b b The margin of the alæ of the scutiform cartilage.

c c The cornua of the os hyoides.

d The cricoid cartilage.

e e The posterior concave surface of the arytenoid cartilages.

f f The posterior obtuse process into which the musculus crico-arytenoideus is inserted, and which is articulated with the cricoid, which articulation is defended by a capsular membrane observable in the Figure, and swelling out on the right articulation, but which, on account of its smallness, is not lettered.

g g The ligaments of the inferior process of the scutiform cartilage.

h The common ligament of the arytenoid cartilages, in which two filaments, as ligaments of the small heads, descend obliquely.

i i The proper posterior ligaments.

k k An osseous granula between the cornua of the scutiform cartilage and os hyoides.

l l Impressions, where the thyroid gland adheres.

m m The cartilages of the origin of the trachea.

THE

Fig. 1.



Fig. 2.



T H E

Forty-third Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

FIGURE I.

VARIOUS Muscles of the Lower Jaw and Os Hyoides in situ, the Skin and Quadratus Colli being removed.

- A A B C The musculus digastricus, or biventer.
 B Its fleshy origin from the mammillary process.
 C The middle tendon passing through the musculus stylo-cerato-hyoideus, and an annular ligament arising from the os hyoides at its fleshy termination A A, in the under jaw D D.
 D D The inferior edge of the under jaw-bone laid bare.
 E E The musculus mylo-hyoideus, which derives its fleshy origin from the internal part of the under jaw, partly under the inferior maxillary glands, and partly at the insertions of the digastric muscle, from whence descending with a double series of muscles, it is inserted into the superior and anterior part of the os hyoides. Immediately under this muscle lie the sublingual glands and salivary ducts of the inferior maxillary gland; both of which are compressed by it, and their continued saliva conveyed forwards into the mouth when this muscle acts, as in deglutition, &c.
 F F The musculi sterno-hyoidei arising from the internal and superior part of the clavicles, and inserted into the inferior and anterior part of the os hyoides.
 G G Parts of the omo-hyoidei, coming from under the mastoid muscles.
 H H Parts of the sterno-thyroidei which arise from the superior and internal part of the sternum, and pass under the sterno-hyoidei to their terminations in the thyroid cartilage, as appears in the following Figure.
 I I The mastoidei.
 K Part of the masseter, on the right-side.
 L Part of the parotid gland, on the same side.
 M M The glands of the under jaw.
 N That part of the musculus stylo-hyoideus which is perforated for the transmission of the middle tendon of the biventer muscle of the under jaw.
 O Part of the internal jugular vein.
 P Part of the carotid artery.
 Q A blood-vessel cut off and tied.

FIGURE II.

Various Muscles lying under those expressed in the former Figure.

- A A A The inferior margin of the under jaw laid bare.
 B B B B The musculi sterno-hyoidei freed from their insertions, and left at their origins.
 C C C C The omo-hyoidei: they are a pair of digastric muscles; they arise fleshy from the upper edge of the scapula, and ascend under the mastoid muscles, where they become tendinous, but, growing fleshy again, are inserted at the base of the anterior bone of the os hyoides.
 D Part of the stylo-hyoideus muscle, at its insertion.
 E E E The mylo-hyoideus muscle on the right-side, not quite freed from its origin, and raised on the left, so that the sublingual gland W appears.
 F F The genio-hyoidei: They arise fleshy from the internal part of the under jaw, which forms the chin, and are inserted into the superior and anterior part of the os hyoides.
 G G The digastric muscles of the lower jaw cut from their insertions.
 H H The mastoidei muscles; that of the right-side being cut from its origin, and left at its insertion; that of the left remaining in situ.
 I The scutiform cartilage of the larynx, which forms what is called the *Pomum Adami*.
 K The aspera arteria.
 L L The thyroid glands.
 M The masseter muscle in situ.
 N The musculus pterygoideus internus in situ. It arises partly tendinous, and partly fleshy, from the cavity of the wing-like process of the os sphenoides, whence it descends to its insertion into the internal and inferior part of the under jaw-bone.
 O Part of the parotid gland.
 P The musculus hyo-thyroideus, arising from the os hyoides: it is inserted into the lower part of the scutiform cartilage. This draws the larynx upwards, in an acute tone of the voice.
 Q The crico-thyroideus.
 R The sterno-thyroideus, terminating in the scutiform cartilage.
 S The internal jugular vein.
 T The carotid artery.
 V A large vein proceeding from the thyroid gland to the subclavian branch.
 W The sublingual gland lying immediately under the musculus mylo-hyoideus.

T H E

T H E

Forty-fourth Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

VARIOUS Muscles of the Head and Neck, which appear on the fore-part, after the Under Jaw, Tongue, Larynx, Aspera Arteria, and Gula, are removed.

A A The musculi longi colli, which arise, partly tendinous, but chiefly fleshy, from the anterior parts of the five superior vertebrae of the thorax, and after dilating, in the middle of their progress into fleshy bellies, are inserted in the same manner as they arise, into the anterior parts of all the vertebrae of the neck. These, from their use, may be called *Flexores colli*.

B B The three scaleni in situ. The first of these muscles arises fleshy from the anterior part of the second, third, and fourth transverse processes of the vertebrae of the neck, and descending obliquely forwards, becomes tendinous at its insertion into the first rib: The axillary nerves pass between this and the following, the scalenus secundus, which likewise arises from the second, third, fourth, and fifth transverse processes of the neck, and is inserted into the second, and sometimes third rib. The scalenus tertius arises from the same transverse processes with the former, and likewise from the fifth and sixth, and is soon inserted into the first rib.

I I The mastoidei, which arise, partly tendinous and partly fleshy, from the superior part of the os pectoris, or sternum, and near half the clavicle M, with two, and sometimes, as here, three distinct origins, K K K, which ascend obliquely, and unite in the middle of their progress, forming a somewhat round, thick, fleshy muscle, and passing over the upper part of the elevator scapulae muscle, becomes broader again, and tendinous, at its insertion into the back part of the mammillary process, and the adjoining part of the os occipitis, above the insertion of part of the splenius.

L L The recti interni majores antici, by some called Par rectum internum colli, and from their use *Flexores capitis*. They arise, partly fleshy, but chiefly tendinous, from the anterior part of all the transverse processes of the vertebrae of the neck, except the first and second; becoming fleshy, they are inserted into the interior appendix of the os occipitis, before the foramen magnum, which transmits the medulla oblongata. They are employed in bending the head forwards.

M M The clavicles.

O The uvula.

P P The bodies of the vertebrae of the neck.

I

T H E



Fig. 1.



Fig. 2.



T H E

Forty-fifth Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

FIGURE I.

THE Muscles of the Face, as they appear after the Skin, Fat, Membranes, and Musculi Quadrati Genarum, are removed.

- A A The muscoli frontales.
- B B The orbiculares palpebrarum.
- C The musculus dilatator alae nasi.
- D The elevator labiorum communis.
- E E The elevator labii superioris proprius.
- F F The sphincter labiorum.
- G G The zygomatici, or distortores oris.
- H The depressor labiorum communis.
- I The depressor labii inferioris proprius.
- K The buccinator.
- L The temporalis.
- M The elevator auriculæ.
- N The masseter.
- a Part of the os jugale.
- b The cartilage of the auricle, freed from the skin.
- c c The parotid gland.
- d The superior salivary duct of the parotid gland, as it descends over the masseter, through the buccinator, into the mouth.
- e e A branch of the carotid artery, which passes through the inferior maxillary gland.
- f Part of the lower jaw-bone laid bare.
- g Part of the inferior maxillary gland.
- O Part of the biventer muscle, in situ.
- P The mastoideus.
- Q Part of the cucullaris.
- R Part of the elevator scapulæ.

S S Parts of the musculi sterno-hyoidei.
T T Parts of the coraco-hyoidei.

FIGURE II.

Shews various Muscles employed in the motions of the Head and Vertebrae of the Neck, which appear on the back-part.

- A Part of the hairy scalp remaining on the fore-part of the head.
- B The os occipitis laid bare.
- C The musculus splenius left at its insertion.
- a Part of the os jugale.
- D D D The musculus complexus raised, to shew its inside.
- E E The recti majores; that on the right side remaining in situ, that on the left hanging down from its origin.
- F F The obliqui superiores in situ.
- G G The inferiores in situ.
- H H The minores, also in situ.
- b The mastoid process of the left-side laid bare.
- c The back-part of the first vertebra of the neck made bare.
- d Part of the complexus inserted into the mammillary process.
- I I I I The spinales colli; that of the left remaining in situ, the right being raised from its inferior part, and turned to one side, to shew its subjacent muscle, the transversalis colli.
- K The transversalis colli, which arises from the transverse processes of the inferior vertebra of the neck, and is inserted into the spinal processes of its superior vertebra.
- L L The musculi interspinales colli.
- e e e The apices of the double spinal processes.

T H E

Forty-sixth Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

FIGURE I.

REPRESENTS various Muscles of the Face, after the Quadratus Genæ is removed.

- A The compressor naris muscle.
 B The elevator alæ nasi, or, from its figure, pyramidalis.
 C The elevator labii superioris proprius.
 D D The orbicularis palpebrarum.
 E The zygomaticus, or distortor oris.
 F A branch of an artery which arises from the carotid in the neck, and perforating the inferior maxillary gland, passes over the under jaw-bone, at the insertion of the masseter muscle, as is here expressed.
 G The os jugale.
 H The os maxillare inferius laid bare, the skin, and musculus quadratus colli, being removed.
 I Part of the carotid artery.
 K M The temporal muscle; K, its external surface; M, its internal surface, next the cranium, turned down.
 L Part of the parotid gland, the greater part of which is dissected, to obtain a view of the following muscle.
 O The masseter muscle in situ. The origin, progress, and insertion of this and the temporal muscle, are distinctly expressed in this and the following figure.

FIGURE II.

Shews the Muscles of the Lips, and some of those of the under jaw.

A B C The buccinator muscle, freed from its origin at the processus coronæ of the under jaw, near N, and left at its insertion at the angle of the lips.

D The elevator labiorum communis. This muscle arises from the fourth bone of the upper jaw, and descends directly to its insertion under the termination of the zygomaticus.

E E The elevator labii superioris proprius, and the dilator alæ nasi muscle.

F The musculus zygomaticus.

G The depressor labiorum communis.

H The depressor labii inferioris proprius.

I The constrictor labiorum.

K M N The temporalis: N its insertion at the processus coronæ of the under jaw.

L Part of the parotid gland.

O The masseter cut from its origin at the os jugale, and left at its insertion into the lower jaw.

P Q Part of the origin of the musculus pterygoideus externus in situ. It arises from the external part of the pterygoid process, and superior part of the os sphenoides, and runs backwards to its insertion into the neck of the condyloid process. To discover the progress of this muscle, the processus coronæ should be cut off.

R The processus condyliformis of the under jaw, most of which is laid bare.

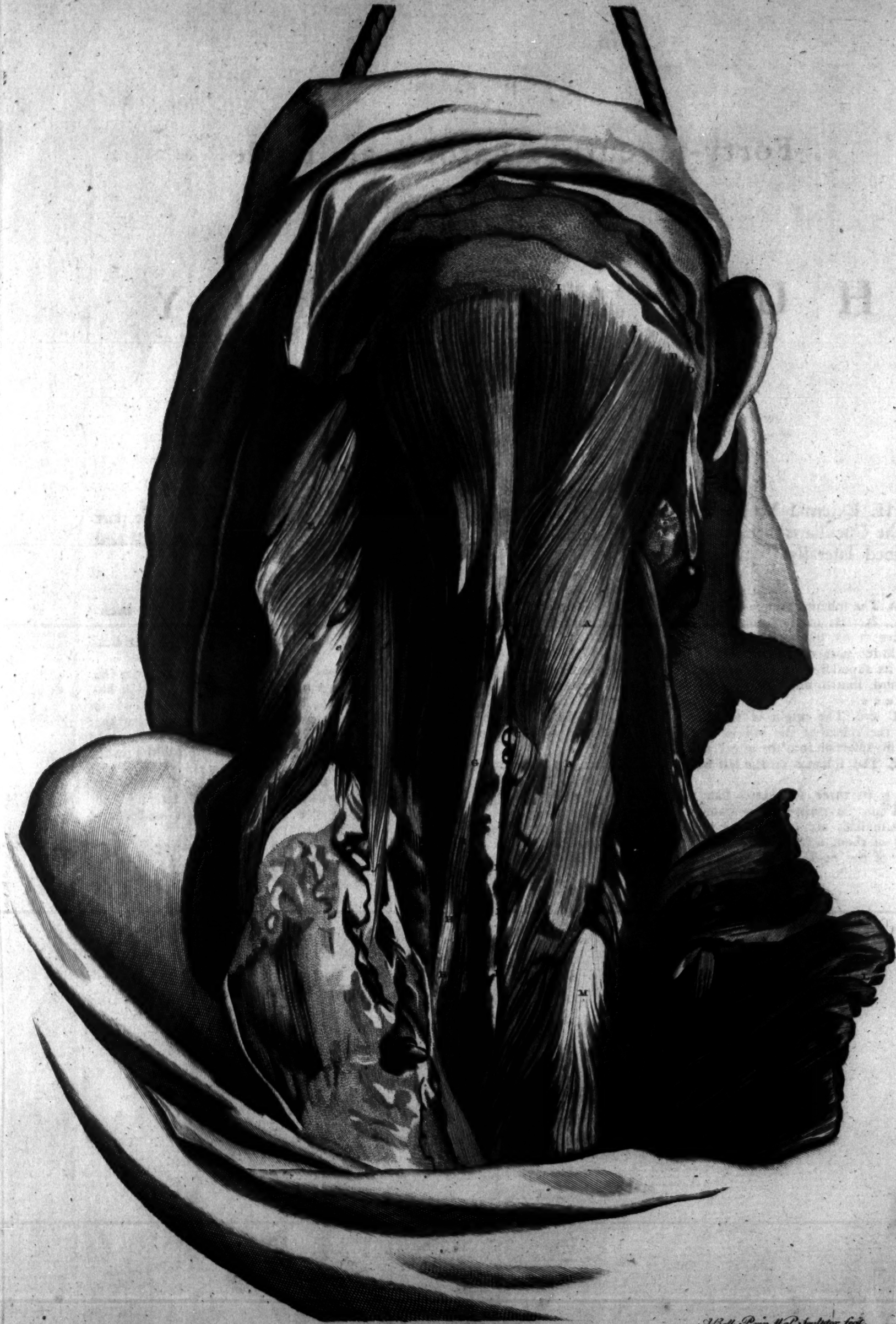
S Part of the digastric muscle of the under jaw.

Fig. 1.



Fig. 2.





T H E

Forty-seventh Anatomical Table

OF THE

H U M A N B O D Y

E X P L A I N E D.

THE External Muscles which move the Head as they appear on the Back-part; the Upper part of the Cucullaris being taken off, and some Muscles of the Shoulder-blade and Thorax raised and reclined laterally.

A A The splenius muscle in situ.

B B, &c. Its partly tendinous and partly fleshy origin from the five or six spines of the superior vertebrae of the thorax. The lower part of this muscle appears, in general, distinct from its superior, and is inserted to the transverse processes of the third, fourth, and fifth vertebrae of the neck, as is expressed at **e e e**.

C C, &c. The origin of the superior part of the splenius from the spines of the inferior vertebrae of the neck; **D D**, its fleshy insertion into the os occipitis.

E E The splenius on the left side, raised and reclined laterally.

e e e Its three, sometimes four, tendinous terminations inserted into as many of the transverse processes of the neck. These muscles are common to the head and neck, so that if either of them acts, it draws the head together with the vertebrae of the neck, to which it is inserted, to that side back-

wards; if they both act, they pull the head directly backwards, together with those vertebrae of the neck.

F G H, &c. The musculus complexus, on both sides in situ, the left being laid bare.

H H Its partly tendinous and partly fleshy origin from the transverse processes of the vertebrae of the thorax, which becomes still more fleshy in its ascent **F G**, and is so inserted into the os occipitis **I I**, immediately under the termination of the splenius **D D**.

f f A part of the complexus muscle inserted into the mammillary process.

K The serratus superior posticus, raised.

L The rhomboides likewise raised and reclined laterally.

M The upper part of the longissimus dorsi, and sacro-lumbalis.

N The musculus levator scapulae, partly appearing.

T H E

T H E

Forty-eighth Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

SEVERAL Muscles of the Head and Neck lying under those represented in the preceding Table.

A The musculus rectus posticus major dissected from its insertion at the occiput D, on the left side, and hanging down from its origin at the double spine of the second vertebra of the neck.

B The same muscle in situ, on the right side.

C C E The rectus minor posticus on the left side laid bare, and remaining in situ on the right side. It is partly hid by the rectus major.

D D The insertion of the recti minores into the os occipitis. They arise from the back-part of the first vertebra of the neck. They pull the head backward on the first vertebra of the neck, and from their use are called *Renuentes*, or Nodders backwards, and are antagonists to a small pair of muscles, which are called Recti Minores Antici, and from their use, *Annuentes*.

F The obliqui inferiores, that on the right side remaining in situ, the left being freed from its insertion, and remaining at its origin. Each of them arises from one of the double spinal processes of the second vertebra of the neck, and after an oblique ascent, is inserted into the transverse process of the first vertebra.

When either of these inferior oblique muscles acts, it draws the transverse process of the first vertebra near the spine of the second; if both act, they contribute to preserve the head more steady.

G H The obliqui superiores, the right remaining in situ G; the left being cut from its insertion at the os occipitis, and left at its origin at the transverse process of the first vertebra of the neck. They perform the same office as the recti majores.

I I An asperity of the os occipitis, where the musculi splenii and complexi terminate.

K K The inferior surfaces of the complex muscles, as they appear when raised and reclined laterally, the greater part of that on the right side being removed.

L Parts of the longissimus dorsi, and sacro-lumbalis.

M M N N The spinalis colli muscle.

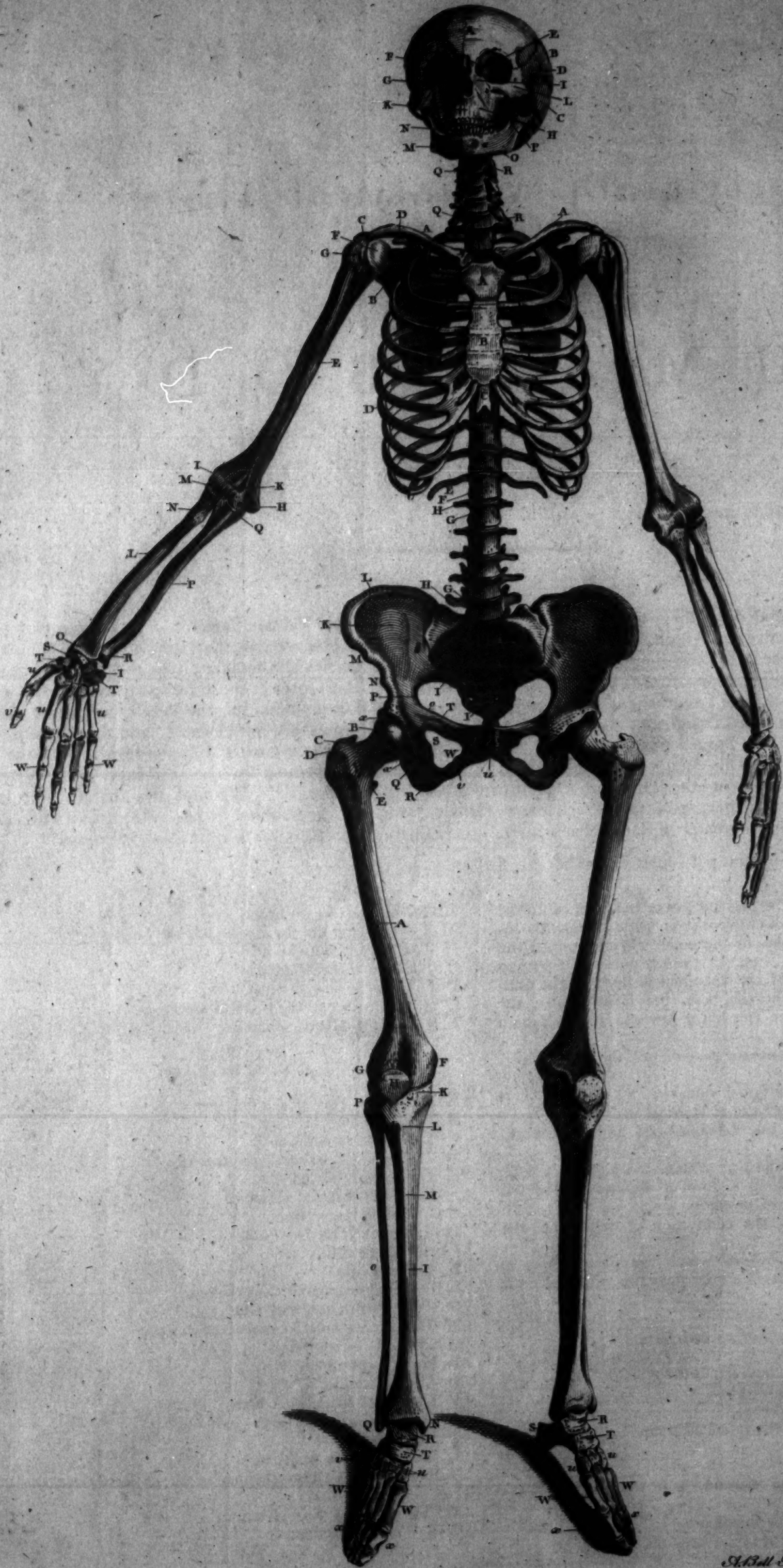
O O The spines of the vertebrae of the neck.

P P The musculi interspinales.

Q The elevator scapulae.

T H E





THE
Forty-ninth Anatomical Table
OF THE
HUMAN BODY
EXPLAINED.

THIS Figure is intended to shew the difference between the Male and Female Skeleton. It is taken from a Female Skeleton five feet high, which being viewed in front, we observe that the Head is, in the Female, smaller than in the Male; that the Bones are less capacious, and the Processes also smaller; that the Thorax is less elevated, and the Sternum more convex; that the Vertebrae of the Loins project more forward, and the Bones of the Pelvis more backward; that the Os Sacrum, as well as all the other Bones of the Pelvis, are larger and wider, and the Os Coccygis straighter; that the Bodies of the Ossa Pubis are less elevated, and their Superior Branches longer; that the Spines and Tuberosities of the Ossa Ischia are at a greater distance from each other; that the Branches of the Ossa Ischia converge more, so that the angle formed by the union of these Bones with the Inferior Branches of the Ossa Pubis, is much larger in the Female. We find also that the Necks of the Thigh-bones are longer, and the Trochanters farther from the Acetabula; hence the upper ends of the Thigh-bones are at a greater distance from each other in the Female than in the Male Skeleton.

Upon examining the particular Bones of this Skeleton, we observe,

1. In the head, that the sagittal future is continued to the root of the nose, which circumstance is more frequently remarked in the female than in the male. We see almost the whole of the frontal bone, a part of the left parietal, a portion of the temporal process of the sphenoid, a share of the temporal bone, the orbits, the ossa nasi, the fossae nasales, the maxillary and cheek-bones, the lower jaw and teeth of both jaws.

2. The bodies and transverse processes of the cervical vertebrae.

3. The bodies of the last dorsal vertebrae.

4. The internal surface of the os sacrum.

5. The disposition of the sternum, ribs and their cartilages.

6. The superior extremities, of which, the right is a little elevated, and the fore-arm in a state of supination, the left fore-arm being in the state of pronation.

7. The ossa innominata, the connection of which with the os sacrum forms the pelvis.

8. The inferior extremities, of which the right is seen in front, while the left is turned a little outwards, especially the leg and foot.

Bones of the Head and Neck.

A The sagittal future extending to the nose.

B A portion of the parietal bone.

C Part of the temporal bone.

D Temporal process of the sphenoid bone.

E The orbit.

F The ossa nasi.

G Part of the septum narium, and the entry of the nostrils.

H The middle of the ossa maxillaria.

I The angle of one of the ossa maxillaria.

K The union of the ossa maxillaria.

PART III.

L One of the ossa malarum.

M The symphysis of the lower jaw.

N The teeth of both jaws.

O The base of the lower jaw.

P The process of this bone.

Q Q The bodies of the cervical vertebrae.

R R Their transverse processes.

Bones of the Trunk.

A The upper part of the sternum.

B The middle of the same bone.

C The cartilago ensiformis.

D The seventh, or last of the true ribs.

E The twelfth, or last rib.

F The twelfth dorsal vertebra.

G G The lumbar vertebrae.

H H Their transverse processes.

I I The os sacrum.

K The os ileum.

L The crest or spine of the os ileum.

M The superior anterior, and

N The inferior anterior process of this bone.

O The brim of the pelvis.

P The sciatic notch.

Q The os ischium.

R The tuberosity of that bone.

S The spinous process of the os ischium.

T The os pubis.

U The symphysis pubis.

V The union between the crus of the os pubis, and that of the os ischium.

W The foramen thyroideum.

X X The acetabulum.

X

Bones

Bones of the Upper Extremity.

- A The clavicle.
 B The scapula.
 C The acromion scapulæ.
 D The coracoid process of that bone.
 E The body of the os humeri.
 F The head of the os humeri.
 G Processes of the upper part of the body of the os humeri.
 H The internal condyle.
 I The external condyle.
 K The trochlea.
 L The radius.
 M The head of the radius.
 N The tubercle, and
 O The inferior extremity of this bone.
 P The ulna.
 Q The upper, and
 R The under part of the ulna.
 SS The first, and
 TT Second row of carpal bones.
 UU The metacarpal bones.
 V The two bones of the thumb.
 WW The three bones of each of the fingers.

Bones of the Inferior Extremity.

- A The os femoris.
 B The head of the os femoris.
 C The cervix of this bone.
 D The trochanter major, and
 E The trochanter minor.
 F The internal,
 G The external condyle.
 H The patella.
 I The tibia.
 K Its head.
 L Its tubercle.
 M The spine.
 N The malleolus internus.
 O The fibula.
 P The head of the fibula.
 Q The malleolus externus.
 R The astragalus.
 S The os calcis.
 T The os scaphoides.
 U The three ossa cuneiformia.
 V The os cuboides.
 WW The five metatarsal bones.
 XX The bones of the toes.

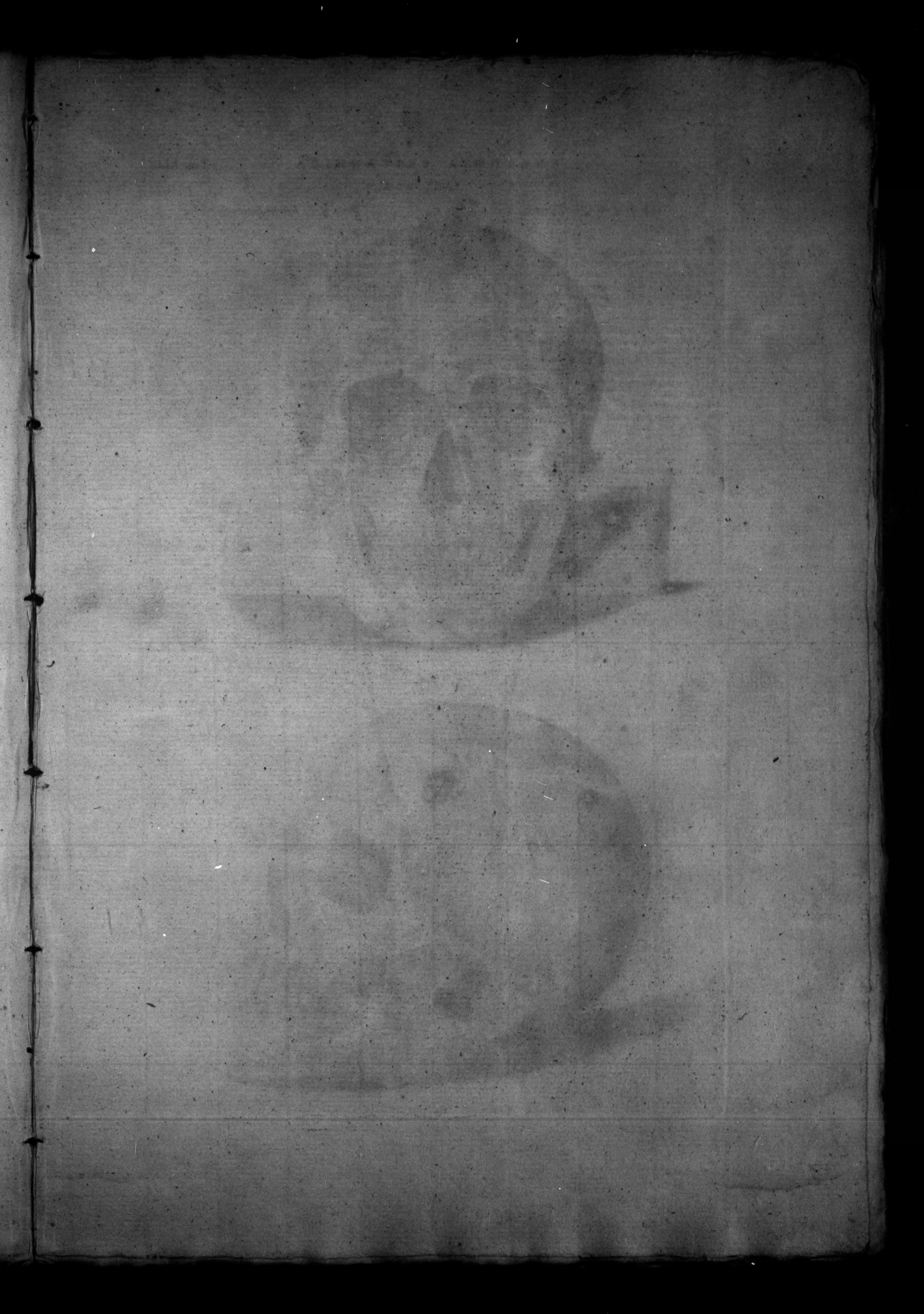


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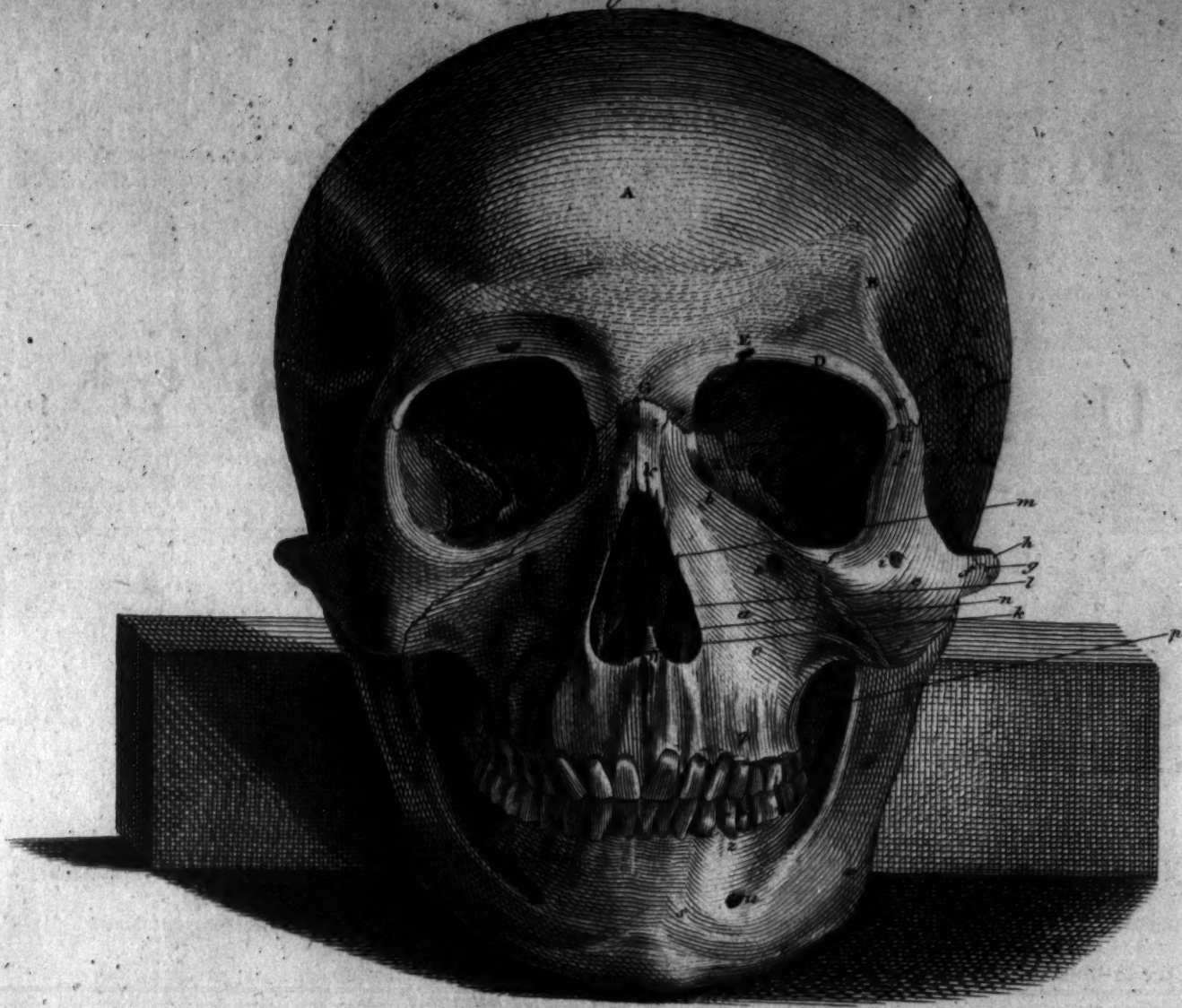
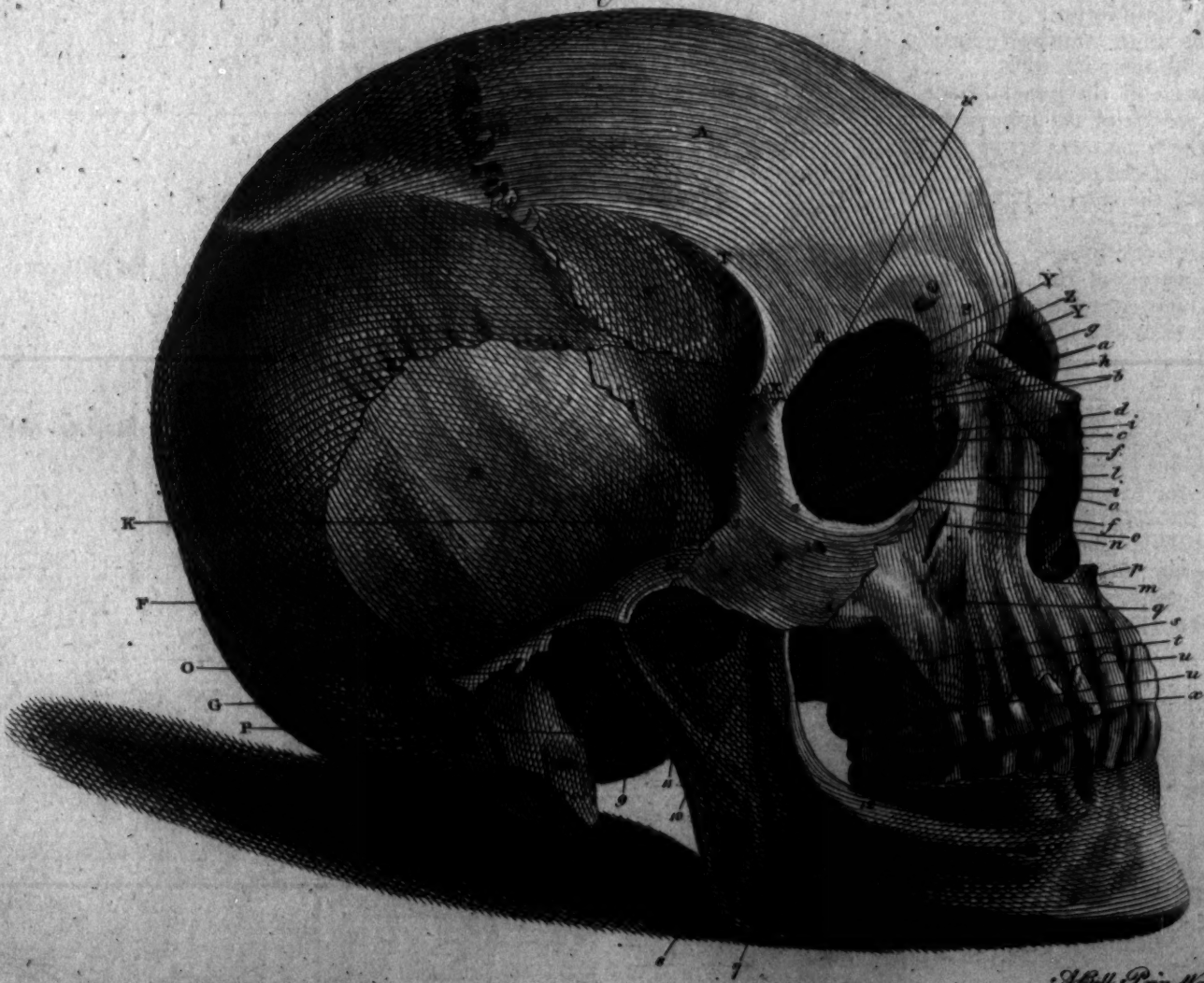


Fig. 2.



T H E

Fiftieth Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

REPRESENTS a Front and Side View of the Bones of the Head.

FIGURE I.

- A The os frontis.
 B The lateral part of the os frontis, with muscular prints upon it.
 C A portion of the os frontis which makes part of the temporal fossa.
 D The superciliary ridge.
 E The foramen superciliare, through which the frontal nerves and arteries pass.
 F The orbital process.
 G Part of the transverse suture.
 H Another portion of the transverse suture.
 I The middle of the temporal fossa.
 K The anterior angle of the parietal bone.
 L The temporal process of the sphenoid bone.
 M A portion of the squamous part of the temporal bone.
 N The upper part of the orbit.
 O Fossa for lodging the lacrymal gland.
 P The foramen opticum.
 Q Part of the transverse suture.
 R The foramen lacerum of the sphenoid bone.
 S The inferior orbital, or sphenomaxillary fissure.
 T The orbital plate of the sphenoid bone.
 V Part of the ossa plana of the æthmoid bone.
 X The os unguis.
 Y The orbital plate of the os malæ.
 Z The upper part of the os nasi.
 & A hole for transmitting vessels into this bone.
 a The middle of the os maxillare.
 b The base of the nasal process of the os maxillare, where vessels frequently pass into the substance of this bone.
 c The external orbital hole, through which the infra-orbital nerves and arteries pass.
 d The connection of the superior maxillary bones by the mystachial suture.
 e The os malæ.
 f f, &c. The different processes of the os malæ.
 g The zygomatic suture.
 h The zygomatic process of the temporal bone.
 i Passage through the os malæ, for the transmission of blood-vessels.
 k The entry of the fossa nasalis.
 l The septum narium.
 m The os spongiosum superius.

- n The os spongiosum inferius.
 o The fossa maxillaris.
 p The tuberosity at the back-part of the superior maxillary bone.
 q The alveoli of the upper jaw for receiving the teeth.
 r r The teeth of the upper jaw.
 s The symphysis of the maxilla inferior, or lower jaw.
 t The base of the lower jaw.
 u Hole at the side of the chin where the inferior maxillary vessel and nerve come out.
 x The angle of the lower jaw.
 y The parts where the coronoid and condyloid processes are sent up.
 z z, &c. The alveoli for the teeth.
 & The teeth of the lower jaw.

FIGURE II.

- A The os frontis.
 B Part of the coronal suture.
 C The os parietale.
 D An arched ridge which gives origin to the temporal muscle.
 E The squamous suture.
 F Part of the lambdoid suture.
 G A small portion of the os occipitis.
 H The squamous part of the temporal bone.
 I Part of the squamous suture between the temporal and sphenoid bones.
 K The middle of the temporal fossa.
 L The zygomatic process of the temporal bone.
 M The zygomatic suture.
 N The mastoid process of the temporal bone.
 O The meatus auditorius externus.
 P Part of the base of the pars petrosa.
 Q The foramen superciliare.
 R The superciliary ridge.
 S An elevation formed by the frontal sinus.
 T A small ridge, under which is
 V A depression, where part of the temporal muscle rises.
 X The angular processes of the frontal bone.
 Y Y The orbital plate of the frontal bone.
 & Part of the lacrymal fossa.
 a a That part of the transverse suture which unites the os frontis to the os planum and os unguis.

b The

- b The foramina orbitaria interna, which transmit small vessels and nerves from the orbit to the nose.
 c The pars plana of the æthmoid bone.
 d The os unguis.
 e That part of the lacrymal groove which is formed by the os unguis.
 f A part of the orbit which belongs to the os maxillare superius.
 g The upper part of the right os nasi.
 h A passage for blood-vessels.
 i i The edge of the os nasi, and os maxillare superius, to which the cartilage of the nose is fixed.
 k The nasal process of the superior maxillary bone.
 l The depression of the os maxillare which belongs to the orbit.
 m A semicircular notch of the os maxillare, forming the under part of the entry into the nostril.
 n The foramen orbitarium externum.
 o Small holes for the transmission of vessels, chiefly into the substance of the bone.
 p A spine or ridge formed by the union of the ossa maxillaria, to which the under part of the septum narium is fixed.
 q The fossa maxillaris.
 r r The malar process to which the cheek-bone is fixed.
 s The larger tuber or bulge of the os maxillare.

- t The elevations of the alveoli over the roots of the teeth.
 u u The edge of the alveoli.
 x The dentes incisivi, canini, et molares of the upper jaw.
 y The os mala.
 z The superior orbital process of the os mala.
 & The zygomatic process of this bone.
 1. The maxillary process.
 2. The orbital plate.
 3. A cavity for lodging part of the temporal muscle.
 4. The zygomatic suture.
 5. The external orbital passage of the os mala.
 6. The base of the maxilla inferior.
 7. The angle of the same bone.
 8. Many muscular prints upon this bone.
 9. The condyloid process.
 10. The coronoid process.
 11. A niche between the processes.
 12. The sharp edge of the coronoid process.
 13. The hole at the side of the chin, for the passage of the inferior maxillary vessels and nerves.
 14. The edge of the alveoli of the under-jaw.
 15. The dentes incisivi, canini et molares of the lower jaw.

THE

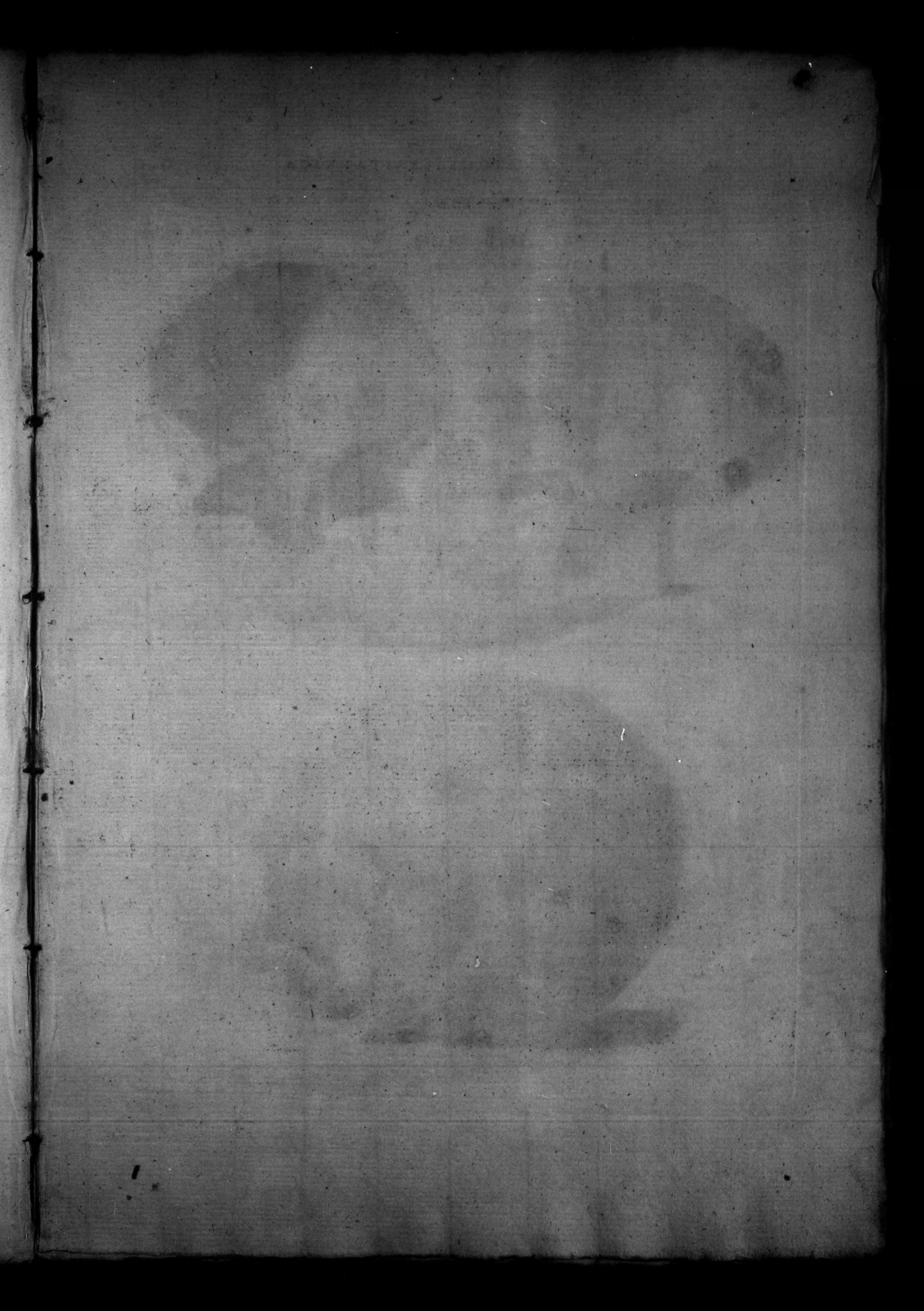


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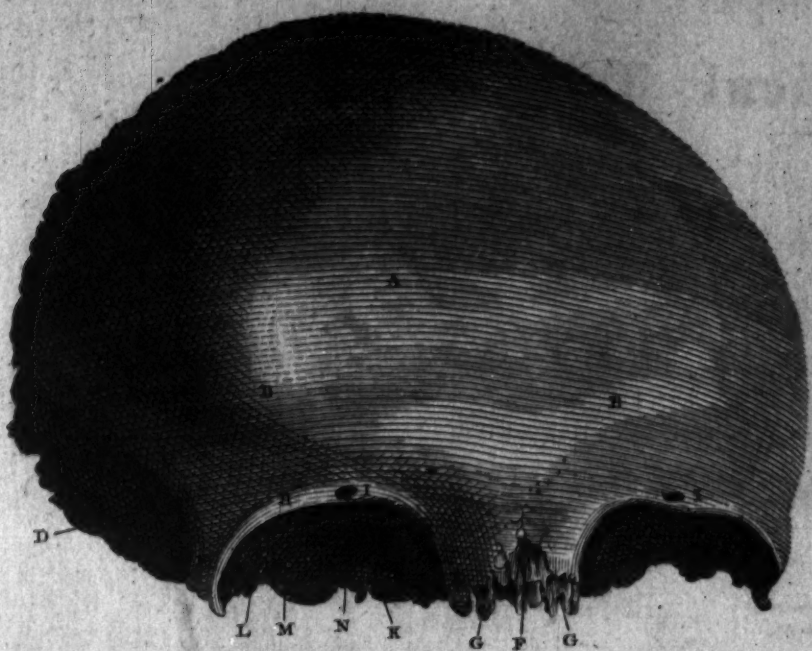


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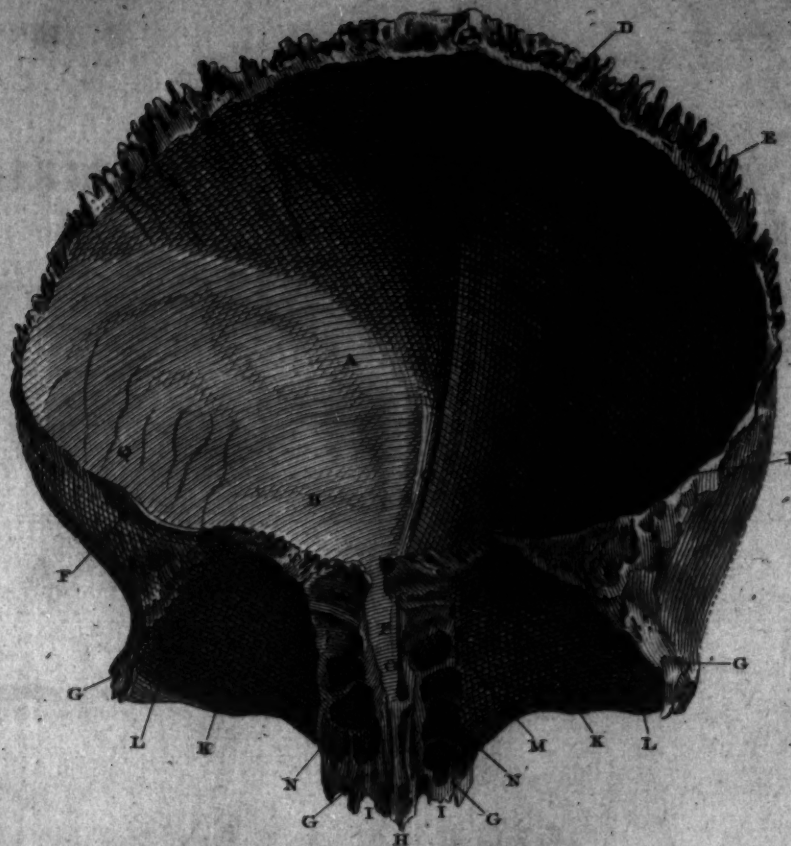


Fig. 1.



T H E

Fifty-first Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

FIGURE I.

REPRESENTS the Posterior and Right Side of the Bones of the Head.

- A The lateral part of the os frontis.
 B A depression of the frontal bone, forming part of the temporal fossa.
 C C The ossa parietalia.
 D The coronal suture.
 E The sagittal suture.
 F F The lambdoid suture.
 G G Ossa triquetra.
 H H The parietal holes, through which small vessels pass into the dura mater.
 I An arched ridge which gives origin to the temporal muscle.
 K K K K The angles of the parietal bone.
 L The os occipitis.
 M Part of the transverse arch or ridge from which the occipital and trapezii muscles have their origin.
 N The squamous suture.
 O The squamous part of the temporal bone.
 P The mastoid process.
 Q The zygomatic process.
 R The meatus auditorius externus.
 S Part of the temporal fossa.
 T The temporal process or wing of the sphenoid bone.
 V The external surface of the orbital plate of the os maxillæ.
 X The temporal fossa of this bone.
 Y The zygomatic suture.
 Z The superior orbital process.
 & The zygomatic process.
 a Part of the os maxillare superius.
 b Part of the external plate of the pterygoid process.
 c Some of the teeth of the upper jaw.

FIGURE II.

Represents the Outer Side of the Os Frontis.

- A The middle and convex part of the os frontis.
 B B The elevations of this bone.

PART III.

- C The muscular print of the right-side.
 D Part of the temporal fossa.
 E E The external and internal angular processes.
 F The nasal process.
 G G The eminences and cavities to which the proper nasal and superior maxillary bones are fixed.
 H The superciliary arch.
 I I The superciliary holes through which the vessels and nerves pass to the fore-head.
 K The orbital plate.
 L The cavity for lodging the lacrymal gland.
 M One of the foramina orbitaria interna.
 N The inequalities which unite this bone to the os sphenoides,

FIGURE III.

Represents the Inner Side of the Os Frontis.

- A The internal concave part of the os frontis.
 B B The cavities which lodge the anterior lobes of the brain.
 C The spine to which part of the falx of the dura mater is fixed.
 D The furrow which lodges a portion of the superior longitudinal sinus.
 E E The ragged edge of the bone which assists in forming the coronal suture.
 F F Other inequalities which join the frontal to the sphenoid bone.
 G G G G The internal surfaces of the four angular processes.
 H The posterior surface of the nasal process.
 I I Other inequalities near the nasal process.
 K K The orbital plates of the frontal bone.
 L L The fossæ lacrymales, or cavities for lodging the lacrymal glands.
 M M The cells which correspond with those of the æthmoid bone.
 N N The passages from the frontal sinuses.
 O A passage in which a process of the falx is lodged, and through which vessels run into the substance of the bone.
 P The opening which receives the cribriform plate of the æthmoid bone.
 Q The furrows which lodge the blood-vessels of the dura mater.

Y

T H E

T H E

Fifty-second Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

REPRESENTS the different Parts of the Parietal and Temporal Bones.

FIGURE I.

- A The outer convex part of the left os parietale.
 B The upper ragged edge of the bone, which, when joined to its fellow, forms the sagittal suture.
 C The anterior edge, which assists in forming the coronal suture.
 D The posterior edge, which joins the occipital bone, and forms part of the lambdoid suture.
 E The inferior semicircular edge, which is joined to the squamous part of the temporal bone.
 F The parietal hole, which commonly transmits a small vein from the integuments of the head to the longitudinal sinus.
 G An arched ridge which gives origin to a large share of the temporal muscle.
 H The anterior and superior angle.
 I The anterior and inferior angle.
 K L The posterior angle.

FIGURE II.

- A The inner concave part of the left os parietale.
 B B The inner surface of the superior edge, where the indentations are more apparent than those of the outer side.
 C The parietal hole shewn in the former figure.
 D The anterior serrated edge.
 E The posterior edge more strongly marked with indentations.
 F F The superior angles.
 G The inferior anterior angle, where the beginning of a furrow is seen, which lodges the trunk of the principal artery of the dura mater.
 H H The principal ramifications of this furrow.
 I I Furrows which lodge other arteries of the dura mater.
 K A small depression which lodges part of the lateral sinus.
 L The inferior edge, which is considerably thinner than the rest.

FIGURE III.

Represents the Outer Surface of the Temporal Bone of the Left Side.

- A The upper and squamous part of the os temporis.
 B The middle part of the same bone.
 C The inferior part of the pars squamosa, which lodges a portion of the temporal muscle.

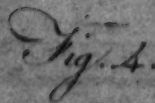
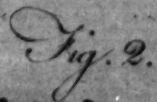
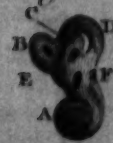
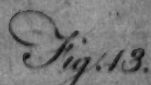
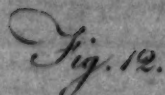
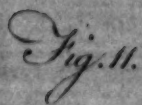
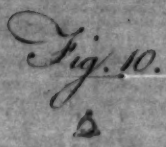
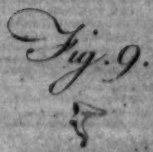
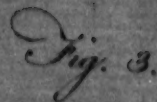
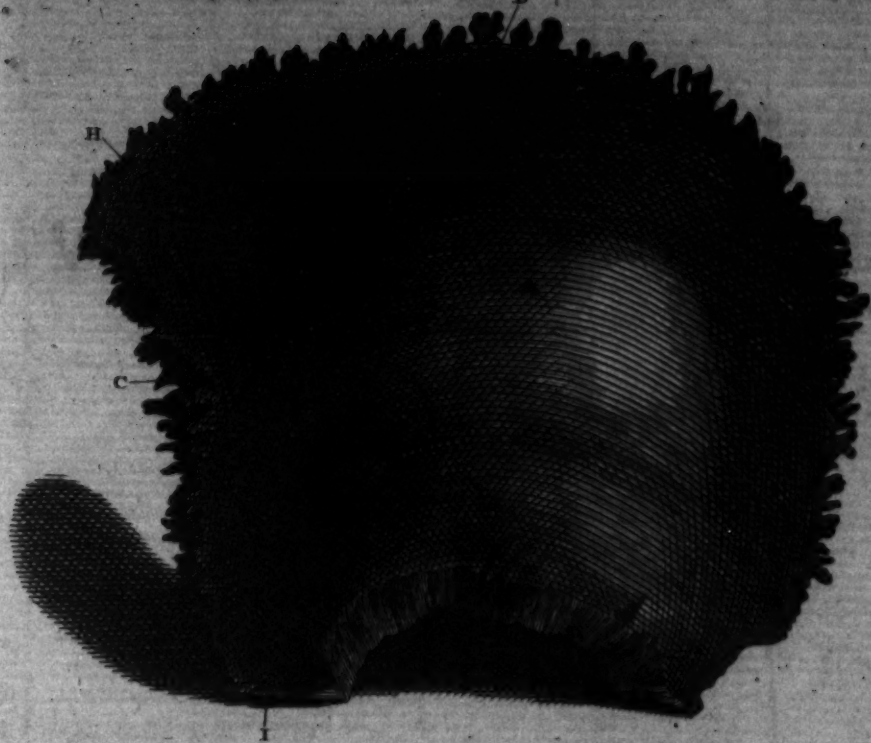
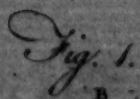
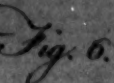
- D A niche in the pars squamosa, to be connected with the under and back part of the parietal bone.
 E The zygomatic process.
 F The base of this process.
 G The transverse or articular process.
 H The mastoid process.
 I Several small holes which transmit vessels to the substance of the bone or to the dura mater.
 K Two other holes of a similar nature, at the root of the zygomatic process.
 L The meatus auditorius externus.
 M The inequalities at the beginning of the meatus.
 N The glenoid cavity for the articulation of the lower jaw.
 O A fissure to which part of the articular ligament is fixed.
 P The vaginal process.
 Q Part of the mastoid groove, where the digastric muscle has its origin.
 R The styloid process.
 S The foramen mastoideum, through which a vein passes into the lateral sinus.
 T The base or upper part of the mastoid process.
 V The inferior and anterior part of the temporal bone, which is joined to the os sphenoides.
 X A portion of the Eustachian tube.
 Y Part of the pars petrosa.

FIGURE IV.

Represents the Inner Side of the Temporal Bone.

- A A The upper edge of the squamous process.
 B B Depressions which correspond with the circumvolutions of the brain.
 C A part which is joined to the os sphenoides.
 D The niche which receives the inferior and posterior angle of the parietal bone.
 E The upper part of the pars petrosa.
 F The groove which lodges the superior petrosal sinus.
 G The fossa which lodges a part of the lateral sinus.
 H The meatus auditorius internus.
 I A niche which assists in forming the foramen lacerum.
 K Part of the fossa which lodges the beginning of the internal jugular vein.
 L The posterior part of the temporal, which is joined to the occipital bone.
 M The foramen mastoideum.

N





N A portion of the mastoid process.
 O A considerable part of the mastoid groove.
 P The styloid process.
 Q The extremity of the pars petrosa divided into two portions.

FIGURE V.

Represents the External Surface of the Osseous Circle which terminates the Meatus Auditorius Externus.

A The posterior, or great extremity of the osseous circle.
 B The anterior or small extremity.
 C The superior niche.
 D A small part of the groove in which the edge of the membrana tympani is fixed.

FIGURE VI.

Represents the Internal Surface of the Osseous Circle.

A The small tuberosity which is opposite to the posterior extremity of the osseous circle.
 B The anterior extremity.
 C C The groove in which the edge of the membrana tympani is fixed.

FIGURE VII.

Represents the situation of the small Bones of the Ear and their connection with each other.

A The malleus.
 B The incus.
 C The os orbiculare.
 D The stapes.

FIGURE VIII. IX. X. XI.

Represent the small Bones of the Ear in their natural size. At the bottom of the Table, the same Bones are seen somewhat magnified.

FIG. VIII.

The Malleus.

A The head.
 B The neck.
 C The small cavity which is articulated with the incus.
 D The large process or handle.

E The small process.
 F The slender process.

FIG. IX.

The Incus.

A The body.
 B The eminences and cavities by which this bone is articulated with the malleus.
 C The short branch of the incus.
 D The long branch, which is bended a little at the extremity to be fixed to the os orbiculare.

FIG. X.

The Stapes.

A The head of the stapes with a small depression in which the os orbiculare is fixed.
 B The base.
 C The long limb.
 D The short limb.
 Within is seen the groove in the base of the stapes to which a membrane is attached.

FIG. XI.

A The os orbiculare.

FIGURE XII.

Represents the Exterior Surface of the Labyrinth.

A The different turns of the cochlea.
 B A large share of the superior semicircular canal.
 C Part of the horizontal one.
 D All the vertical canal.
 E The fenestra ovalis.
 F The fenestra rotunda.

FIGURE XIII.

Represents a part of the Pars Petrosa which forms the Labyrinth, and this divided into Cochlea, Vestibulum, and Semicircular Canals.

A The hollow part of the cochlea which forms a share of the meatus auditorius internus.
 B The superior semicircular canal.
 C The horizontal canal.
 D The vertical canal.

THE

T H E

Fifty-third Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

REPRESENTS different views of the Sphenoidal, Oethmoidal, and Occipital Bones.

FIGURE I.

The Internal, or Upper Surface of the Os Sphenoides.

- A A The superior and anterior part of the os sphenoides, which is joined to the under and back part of the frontal bone.
 B B The temporal plates, or processes of the sphenoid bone.
 C C The transverse processes.
 D D The small anterior process, which unites with the œthmoid bone.
 E E The protuberance which is situated before the separation of the optic nerve.
 F F The foramina optica, through which the optic nerves pass.
 G G The anterior clinoid processes.
 H H The posterior clinoid processes.
 I I Part of the foramina lacerata, through which the third, fourth, sixth, and first part of the fifth pair of nerves, go into the orbit, and a vein returns into the cavernous sinus.
 K K The lateral parts of the cella turcica.
 L L The cella turcica, for lodging the glandula pituitaria.
 M M The cavities of the temporal processes, which receive the lateral lobes of the brain.
 N N The foramina rotunda, which transmit the superior maxillary nerves.
 O O The foramina ovalia, which transmit the inferior maxillary nerves, and sometimes veins from the dura mater.
 P P The foramina spinalia, which transmit the principal arteries of the dura mater.
 Q Q The ragged edge of the bone, which assists in forming the sphenoidal suture.
 R R The part which joins the cuneiform process of the occipital bone.
 S S Part of the spinous processes.
 T T A portion of the pterygoid processes.

FIGURE II.

The external surface of the Os Sphenoides.

- A A The processus azygos, or ridge which is joined to the back-part of the vomer.
 B B The small triangular processes which grow from the body of the bone.
 C C The orifices of the sphenoidal sinus.
 D D The foramina lacerata, which transmit the nerves and vessels mentioned in the former figure.

- E E The anterior and superior part of the body of the os sphenoides.
 F F The external surface of the transverse processes.
 G G The orbital plates, or processes.
 H H The superior extremities of the temporal processes.
 I I The middle of these processes, which forms a share of the temporal fossæ.
 K K The asperities by which this bone is joined to the ossa malarum.
 L L The gutters which lodge branches of the third pair of nerves.
 M M The foramina rotunda.
 N N The foramina pterygoidea, which transmit reflected branches of the fifth pair of nerves.
 O O The anterior openings which assist in forming the sphenomaxillary fissures.
 P P The foramina ovalia.
 R R The roots of the pterygoid processes.
 S S The internal plates of these processes.
 T T The hook-like processes at the extremities of the internal plates.
 V V Small sinuosities over which the tendons of the circumflex muscles of the palate play.
 X X The external plates of the pterygoid processes.
 Y Y Parts adapted to the palate bones.
 Z Z The posterior openings common to these bones and the ossa temporum: Over these openings, the internal carotid arteries pass.

FIGURE III.

An External View of the Os Œthmoides.

- A A The anterior extremity of the nasal plate which forms the superior part of the septum narium.
 B B The posterior extremity of this plate, which is very thin.
 C C The œthmoidal grooves or chinks which separate the nasal plate from the ossa spongiosa superiora.
 D D The passages for the different branches of the olfactory nerves.
 E E The ossa spongiosa superiora.
 F F The cavities of these bones.
 G G Part of the œthmoidal cells.
 H H The inequalities by which this bone is joined to the os frontis.
 I I The posterior extremity which is joined to the os sphenoides.
 K K The

Fig. 1.



Fig. 2.



Fig. 3.

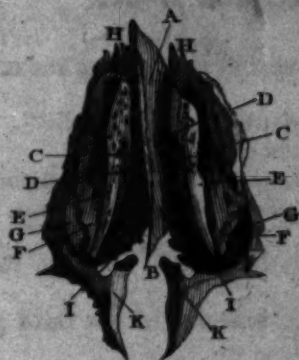


Fig. 4.

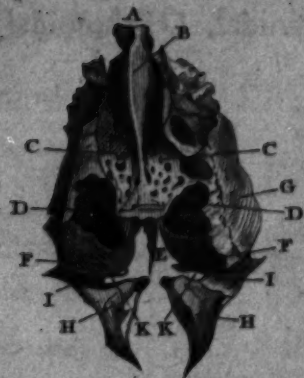


Fig. 5.



Fig. 6.



Fig. 7.



Fig. 8.





KK The small cornua which are joined to the body of the sphenoid bone.

FIGURE IV.

An Internal View of the Os Œthmoides.

- A The anterior extremity of the os Œthmoides, terminating in a small flat process.
- B The upper part of the Crista galli.
- C C The cribriform plate, with the different passages of the olfactory nerves.
- D D Some of the cells of the Œthmoid bone.
- E The posterior extremity of the nasal plate, which forms part of the septum narium.
- F F The posterior edges of the os Œthmoides.
- G A great part of the os planum of the right-side.
- H H The superior part of the triangular processes, which are joined to the body of the sphenoid bone.
- I I The joining of these processes with the os Œthmoides.

FIGURE V.

The Right Sphenoidal Corner, or Os Triangulare, represented in the two former Figures.

- A The internal surface of this bone.
- B The small niche found at the internal and superior angle.
- C The small Œthmoidal or external process.
- D The anterior sphenoidal process.
- E The posterior sphenoidal or sharp process.

FIGURE VI.

- A The external and convex surface of the right sphenoidal cornu.
- B The Œthmoidal or external process of this bone.
- C The small niche formed near the internal and superior angle.
- D The anterior sphenoidal process.
- E The posterior sphenoidal process.

FIGURE VII.

Represents the External Surface of the Os Occipitis.

- A The superior angle.
- B B The ragged edge of the bone which assists in forming the lambdoid future.
- C C The irregularities at the lateral and inferior parts, where this bone is joined to the ossa temporum.

- D D The transverse process.
- E E The lower or small arch, or transverse process.
- F F The perpendicular spine. Under the two upper arches are seen prints made by the muscles, which come from the spine to be fixed to this bone.
- G The foramen magnum which transmits the medulla oblongata.
- H H The occipital condyles, which are articulated with the first vertebra of the neck.
- I I The posterior condyloid foramina, which transmit branches of the cervical veins into the lateral sinuses.
- K K The inner side of the right, and the outer side of the left anterior condyloid foramina, which transmit the ninth pair of nerves.
- L L Niches where the lateral sinuses pass out of the head.
- M The extremity of the cuneiform process, upon which are seen prints which give origin to some of the flexor muscles of the head.

FIGURE VIII.

Represents the Internal Surface of the Os Occipitis.

- A The superior angle.
- B B The middle or lateral angles.
- C C The eminences and cavities which assist in forming the lambdoid future.
- D D The superior occipital fossie, which lodge a share of the posterior lobes of the brain.
- E E The inferior occipital fossie, which lodge a part of the cerebellum.
- F F F F The extremities of the crucial spine or ridge: The falx major is fixed to the upper part of the perpendicular limb, the falx minor to the under part, and the tentorium to the two lateral limbs.
- G G G The fossie which lodge the three large sinuses. The perpendicular contains a share of the superior longitudinal sinus, and the transverse receive the lateral sinuses.
- H The middle of the crucial ridge in form of a tuberosity.
- I I The openings which form part of the foramina lacera, for the exit of the lateral sinuses.
- K K The small processes which assist in forming these openings.
- L L The posterior condyloid holes.
- M The anterior condyloid hole.
- N The concave surface of the cuneiform process, over which the medulla oblongata passes.
- O The inequalities by which this process is united with the sphenoid bone.
- P The foramen magnum.

T H E

Fifty-fourth Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

FIGURE I.

REPRESENTS a View of the Internal Surface of the Base of the Cranium.

- A A A** A part of the substance of the diploe.
B The upper edge of the zygoma.
C A portion of the external temporal fossa of the same side.
D The mastoid process.
E A part of the frontal spine.
F A hole at the bottom of this spine, which lodges a process of the dura mater and small blood-vessels.
G Part of the groove which lodges the beginning of the superior longitudinal sinus.
H H The frontal fossae which support, and are marked with the contortions of the anterior lobes of the brain.
I I The cribriform plate of the ethmoid bone, through which the olfactory nerves pass.
K The crista galli to which the falx is fixed.
L The small process of the sphenoid, which projects some way into the posterior part of the ethmoid bone.
M M A part of the sphenoidal suture, which joins the frontal and sphenoidal bones together.
N N The transverse spinous processes of the sphenoid bone.
O O The foramina optica through which the optic nerves and ocular arteries pass.
P The processus semi-olivaris, which is contiguous to the separation of the optic nerves.
Q Q The anterior clinoid processes.
R R A portion of the foramina lacerata of the sphenoid bone, through which the third, fourth, sixth, and first part of the fifth pair of nerves pass to the orbits, and the ocular veins return from them.
S The cella turcica, or fossa pituitaria.
T T The fossae in which the two internal carotid arteries run, after they have entered the skull.
V The posterior clinoid processes.
X X The foramina rotunda which transmit the superior maxillary nerves.
Y Y The foramina ovalia which transmit the inferior maxillary nerves.
Z Z The foramina spinalia which transmit the principal arteries of the dura mater.
& & The sphenoidal fossae which lodge the lateral lobes of the brain.
a a Part of the sphenoidal suture, by which the sphenoid and temporal bones are united.
b b Part of the openings at the point of the petrosal processes, over which the internal carotid arteries run to the brain.

- c c** The posterior surface of the petrosal processes of the temporal bones.
d d Passages through which reflected nerves go between the fifth and seventh pairs.
e e Grooves which lodge the superior petrosal sinuses.
f f The points of the petrosal processes.
g g The internal auditory passages.
h h The fossae which contain a share of the lateral sinuses.
i i The passages common to the temporal and occipital bones, through which the lateral sinuses pass out of the head.
k k Part of the temporal fossae which are marked by the middle part of the brain.
l The cuneiform or basilar process of the occipital bone which is hollow to receive the medulla oblongata.
m Passages which allow blood-vessels to go into the substance of the bone.
n n Part of the holes common to the occipital and temporal bones; through these the eighth pair and accessory nerves go out of the cranium, a membranous partition being placed between them and the lateral sinus.
o o The anterior condyloid holes, which give passage to the ninth pair of nerves.
p The foramen magnum through which the medulla oblongata goes to the spine.
q q Small protuberances at the side of the foramen magnum, which give origin to the capsular ligament of the first vertebra of the neck.
r r The inner edge of the foramen magnum.
s The inferior limb of the cruciform spine of the occipital bone, to which the third process of the dura mater is fixed.
t t The fossae which contain the lateral sinuses.
u u The inferior occipital fossae which lodge the cerebellum.
x x Portions of the lambdoid suture.

FIGURE II.

Represents a View of the External and Under Surface of the Base of the Cranium and Upper Jaw.

- A A A A** The four dentes incisores.
B B The two dentes canini.
C C C C C The five dentes molares.
D The foramen incisivum, which is filled up by cellular substance, with small vessels and nerves belonging to the nose and mouth.
E E The palate plates of the superior maxillary bones.
F The longitudinal palate suture.
G G The palate plates of the ossa palati.
H H The foramina gustativa, or palatina posteriora, through which the palatine vessels and nerves pass.

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Fig. 1.

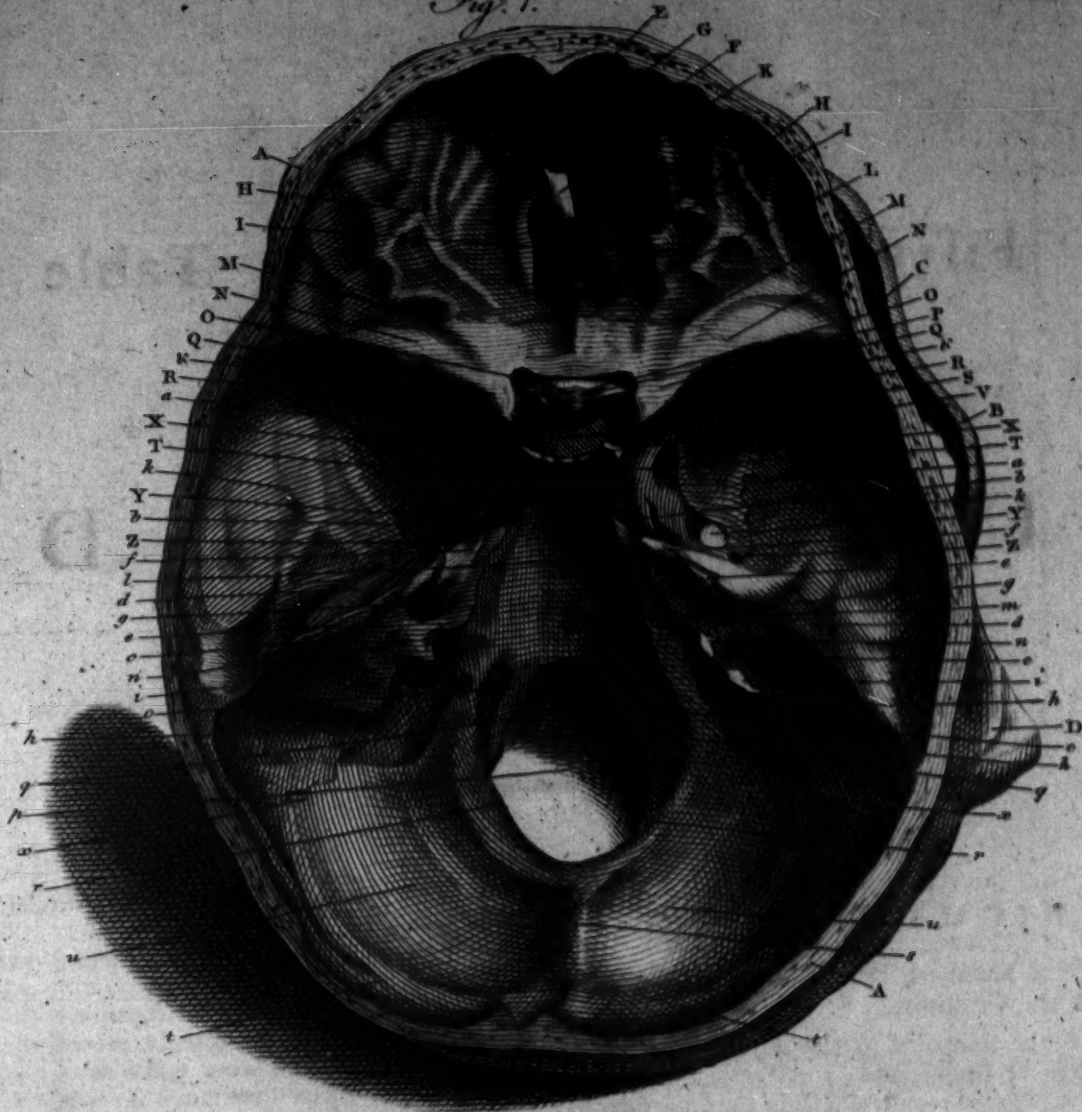
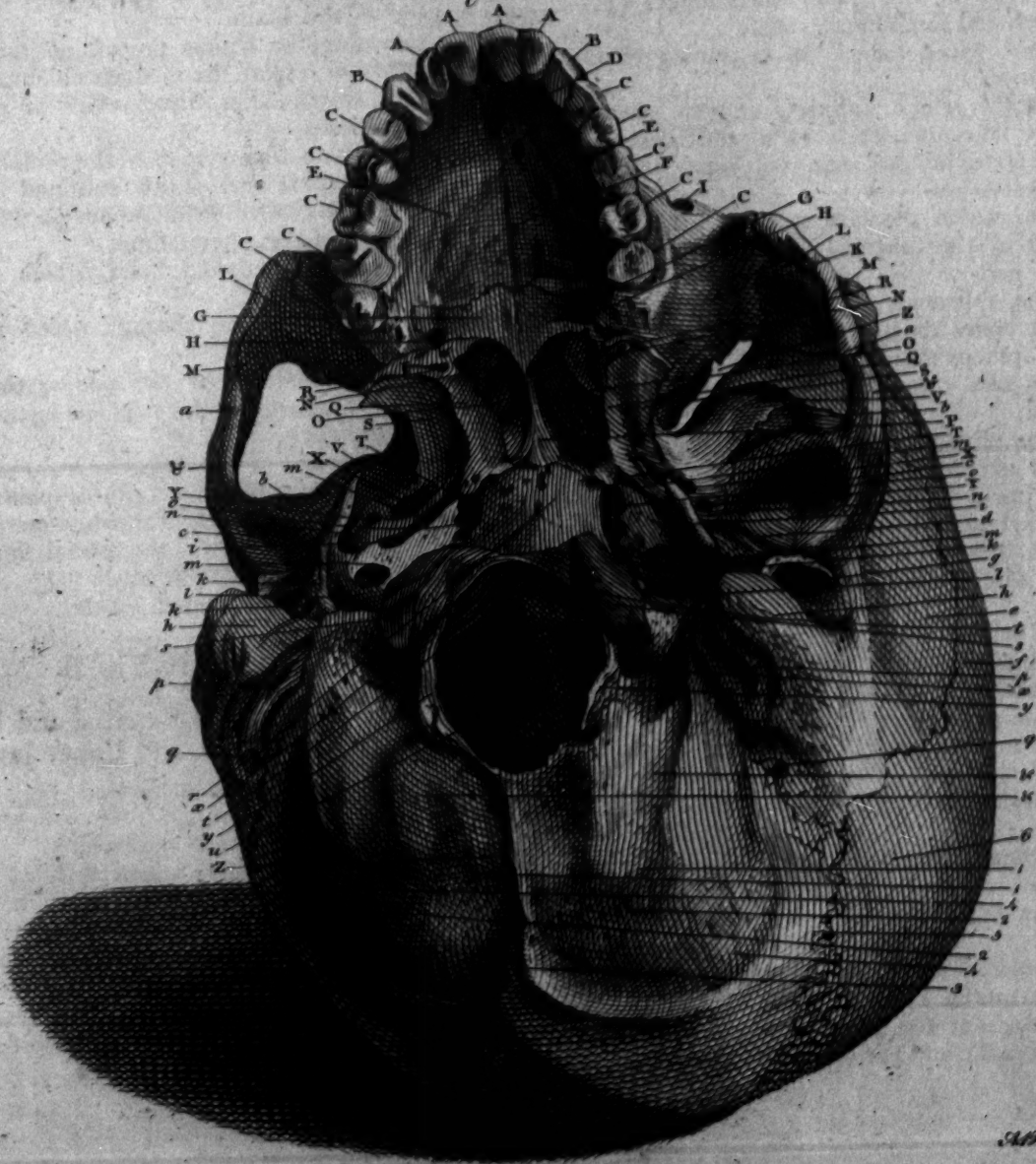


Fig. 2.



6

I The foramen infra-orbitarium, or orbitarium externum, through which the superior maxillary vessels and nerves pass to the face.

K Part of the tuberosity of the superior maxillary bone.

L L Part of the internal surface of the ossa malarum.

MM The under edge of the zygoma.

NN The anterior part of the ossa spongiosa inferiora.

OO The posterior part of the same bones.

P The posterior part of the Vomer.

QQ The pterygoid processes of the sphenoid bone.

RR The hook-like processes round which the circumflex muscles of the palate move.

SS The fossæ which give rise to the internal pterygoid muscles.

TT The foramina pterygoidea, where branches of the fifth pair of nerves pass through.

VV The outer part of the sphenoid bone, which gives origin to the external pterygoid muscles.

XX The foramina ovalia.

YY The foramina spinalia.

Z The foramen lacerum inferius of the orbit, or sphenomaxillary fissure.

& & The zygomatic processes of the temporal bones.

a a The zygomatic futures.

b b The articular process of the temporal bones.

c c The glenoid, or articular cavities.

d The glenoid fissure of the left-side, to which part of the articular ligament is fixed.

e The squamous part of the temporal bone.

f The squamous future of the left-side.

g The meatus auditorius externus.

h h The mastoid processes.

ii The styloid processes.

kk The capsular or vaginal processes.

ll The fossæ which lodge the beginning of the internal jugular veins.

mm The passages of the internal carotid arteries.

nn The point of the spinous processes of the sphenoid bone.

oo The passages at the point of the petrosal processes, which are filled up by a ligamentous substance, over which the internal carotid arteries run to the brain.

pp Part of the mastoid grooves which give rise to the digastric muscles.

qq The foramina mastoidea.

r The cuneiform, or basilar process of the occipital bone.

ss The condyles of the occipital bone.

tt The tuberosities which give origin to the capsular ligament of the vertebra atlas.

u The middle of the foramen magnum occipitis.

xx The posterior condyloid foramina.

yy The external edge of the foramen magnum.

zz The perpendicular occipital spine.

& & Small fossæ which give origin to the muscoli recti posteriores capitis.

1 1. The inferior arch of the occipital bone, which separates the former muscles from the muscoli complexi.

2 2. The small fossæ which give rise to the muscoli complexi.

3. The middle of the superior arch which separates the complex from the trapezii muscles.

4 4. Muscular prints along this arch.

5. Part of the lambdoid future.

6. Part of the parietal bone.

THE

THE
Fifty-fifth Anatomical Table
OF THE
HUMAN BODY
EXPLAINED.

REPRESENTS the different Bones of the Face, to which are added Views of the Teeth and Os Hyoides.

FIGURE I.

A View of the External Surface of the *Ossa Nasi*.

- A A The upper part which is joined to the frontal bone.
- B B The middle part.
- C C The holes through which small blood-vessels pass into the substance of the bones or nose.
- D D The inferior ragged edge which is fixed to the cartilage of the nose.

III T

FIGURE II.

A View of the Internal Surface of the *Ossa Nasi*.

- A A The superior extremity.
- B B The inner edge which projects a little to be fixed to the anterior part of the septum narium.
- C C The cavity which forms part of the arch of the nose.
- D D The holes through which blood-vessels pass into the nose.
- E E The inferior edge, which is broader and thinner than the parts above.

FIGURE III.

The External Surface of the *Os Maxillare Superius* of the Left-side, with a small share of the *Os Palati*.

- A The nasal process of the *os maxillare*.
- B The inequalities by which this bone is joined to the *os frontis*.
- C The angle which is joined to the under end of the *os nasi*, and to the cartilage of the nose.
- D The edge of the orbit.
- E The orbital plate.
- F The groove which belongs to the superior maxillary canal.
- G The unequal surface by which this bone is joined to the *os male*.
- H H The malar process.
- I The orifice of the superior maxillary canal, through which blood-vessels go into the substance of the bone.
- L The maxillary fossa.
- M The opening into the nose.
- N The spine which is joined to the under part of the septum narium.
- O Part of the palate plate.

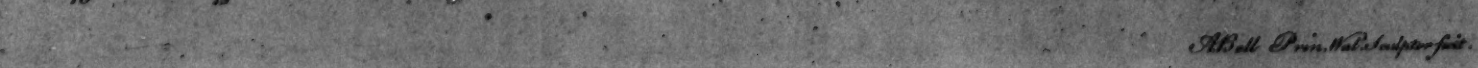
- P The maxillary tuberosity.
- Q A small part of the *os palati*.
- R R The alveolar arch.
- S S The edge of the *dentes incisores*.
- T The *dens caninus*.
- V V The small or anterior *dentes molares*.
- X X X The large or posterior *dentes molares*.

FIGURE IV.

The Internal Surface of the *Os Maxillare Superius* of the Left-Side, with the *Os Palati*.

- A The nasal process.
- B The base of the nasal process.
- C The part to which the *os spongiosum inferius* is connected.
- D The under end of the lacrymal groove.
- E The opening into the antrum maxillare.
- F F Parts belonging to the *os palati*.
- G The small sinus frequently found in the *os palati*.
- H H The little cells situated in the upper part of the superior maxillary bone.
- I The palatine opening which assists in forming the foramen incisivum.
- K The future which unites the palate and maxillary bones.
- L The nasal plate of the *os palati*, which forms part of the nose and antrum maxillare.
- M The eminence by which the *os palati* and *os spongiosum inferius* are joined.
- N The part of the *os maxillare*, which forms the largest share of the nasal fossa.
- O O The irregular surface, the upper part of which is joined to the septum narium, and the under part to its fellow on the opposite side.
- P P A surface still more irregular, by which the superior maxillary and palate bones are joined to those of the opposite side.
- Q The anterior extremity of the palate bone.
- R The proper hole of this bone through which the vessels and nerves pass.
- S The foramen palatinum posterius, through which a nerve and vessels pass to the palate.
- T The palate arch of the superior maxillary bone.
- V The pterygoid process of the *os palati*.
- X X The two *dentes incisivi*.

Y The



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ot

ALPHABETIC LIST

1. The first part of the list contains the names of the persons who were present at the meeting on the 1st of January 1880. The names are arranged in alphabetical order, and the list is divided into two columns. The first column contains the names of the persons who were present at the meeting on the 1st of January 1880, and the second column contains the names of the persons who were present at the meeting on the 2nd of January 1880.

2. The second part of the list contains the names of the persons who were present at the meeting on the 3rd of January 1880. The names are arranged in alphabetical order, and the list is divided into two columns. The first column contains the names of the persons who were present at the meeting on the 3rd of January 1880, and the second column contains the names of the persons who were present at the meeting on the 4th of January 1880.

3. The third part of the list contains the names of the persons who were present at the meeting on the 5th of January 1880. The names are arranged in alphabetical order, and the list is divided into two columns. The first column contains the names of the persons who were present at the meeting on the 5th of January 1880, and the second column contains the names of the persons who were present at the meeting on the 6th of January 1880.

4. The fourth part of the list contains the names of the persons who were present at the meeting on the 7th of January 1880. The names are arranged in alphabetical order, and the list is divided into two columns. The first column contains the names of the persons who were present at the meeting on the 7th of January 1880, and the second column contains the names of the persons who were present at the meeting on the 8th of January 1880.

- Y The dens caninus.
 Z Z The two small dentes molares.
 & & The three large dentes molares.

FIGURE V.

The External Surface of the Os Unguis of the Right Side.

- A The posterior plane surface, which forms part of the orbit.
 B The anterior part, which makes a share of the canal for lodging the lacrymal sac and duct. Many small holes into which filaments from the membrane which lines the bone enter, to make the adhesion more secure.
 C The small ridge which separates the two parts of the bone from each other.

FIGURE VI.

The Internal Surface of the Right Os Unguis.

- A The upper,
 B The inferior part.
 C C Many eminences and cavities which belong to the æthmoidal cells.

FIGURE VII.

The External Surface of the Left Os Malæ.

- A External surface of the os malæ, which forms the eminence of the cheek.
 B The external orbital hole for the transmission of blood-vessels from or into the orbit.
 C The edge of the orbit.
 D The orbital plate.
 E The external orbital process, which joins that of the os frontis.
 F The zygomatic niche.
 G The zygomatic process.
 H The inferior orbital process.
 I The maxillary process.

FIGURE VIII.

The Internal Surface of the Left Os Malæ.

- A The internal fossa of the os malæ, which contains part of the temporal muscle.
 B The orbital plate of this bone.
 C The unequal surface, which is joined to the superior maxillary bone.
 D D The anterior edge, which is also joined to the superior maxillary bone.
 E The internal surface of the zygomatic process.
 F The superior orbital process.
 G The subaltern process.
 H The zygomatic opening.

FIGURE IX.

The External Surface of the Os Spongiosum Inferius of the Right Side.

- A The external surface spread over with numerous small holes, which mark its porosity.
 B The inferior edge turned somewhat outwards; it is thick and strong.
 C The superior edge, from which a thin plate is sent downwards to cover a portion of the antrum maxillare.
 D The large and anterior extremity of this bone, where the connection is chiefly made with the superior maxillary bone.
 E The posterior extremity, which is narrow and irregular on its surface.
 F The superior process which joins the os unguis, to form a share of the lacrymal groove.

PART III.

FIGURE X.

The Internal Surface of the same Os Spongiosum. It is convex, and, like the External Surface, is also of a Spongy Texture.

- A The middle and anterior part.
 B The upper edge, which, through its whole length, is joined to the superior maxillary and palate bones.
 C The under edge, which is turned somewhat outwards.
 D The anterior extremity.
 E The anterior and inferior process.
 F The anterior and superior process.
 G The posterior extremity, which is united to the os palati.

FIGURE XI.

Represents the Posterior and almost all the External Surface of the Right Os Palati.

- A The small process which makes part of the bottom of the orbit.
 B The nasal plate.
 C A groove which forms part of the passage for the palatine vessels and nerves.
 D The pterygoid process.
 E The proper palate process, which makes part of the fossa nasalis.

FIGURE XII.

The Anterior and almost all the External Surface of the same Os Palati.

- A The upper part of this bone, which forms a share of the orbit.
 B The small sinus, which is similar to those of the æthmoid bone.
 C The opening which concurs in forming the foramen pterygo-palatinum, through which the lateral nasal vessels and nerves pass.
 D The external surface of the nasal process.
 E The small hole which penetrates the thickness of the bone.
 F The beginning of the groove, which helps to form the foramen gustativum.
 G The small gutter observable on the inner side of the bone.
 H The pterygoid process.
 I The posterior edge of the bone to which the velum palati is fixed.
 K The surface by which the two ossa palati are connected to each other.

FIGURE XIII.

Represents the Right Side of the Vomer.

- A A The upper edge which belongs to the nasal plate of the æthmoid bone, and to the middle cartilage of the nose.
 B A small ridge on the right side of the bone.
 C The inferior edge of the bone, which is somewhat irregular, and is connected to the superior maxillary and palate bones.
 D The posterior, inferior, and sharp edge of the vomer.
 E The posterior and superior extremity, which is broad and hollow, to receive the processus azygos of the sphenoid bone.

FIGURE XIV.

Represents a View of the External Surface of the Lower Jaw.

- A The middle of the lower jaw, which has the name of Symphysis of the Chin.
 B B Prints which are formed by the muscles of the under lip.
 C A small fossa which points out the middle of the chin.

A a

D The

- D The external lip of the lower jaw.
 E F The base of the lower jaw.
 G The angle of the lower jaw.
 H The inner side of the right angle.
 I I Prints formed by the masseter muscle.
 K The coronoid process.
 L The condyloid process.
 M The fossa to which the external pterygoid muscle is fixed.
 N The opening between the processes.
 O O The anterior edge of the coronoid processes.
 P The orifice of the inferior maxillary canal, through which the vessels and nerves of this name pass.
 Q Groove on the inner side of the coronoid process, which gives attachment to muscles.
 R A small sharp process which juts out from the under and fore part of the beginning of the inferior maxillary canal.
 S The orifice at the side of the chin, where the inferior maxillary vessels and nerves pass out.
 T The external edge of the sockets for the teeth.
 V The internal edge of the sockets.
 XXXX The dentes incisivi.
 Y The dens caninus of the left side.
 Z Z The anterior or small dentes molares.
 & & The posterior or large dentes molares.

FIGURE XV.

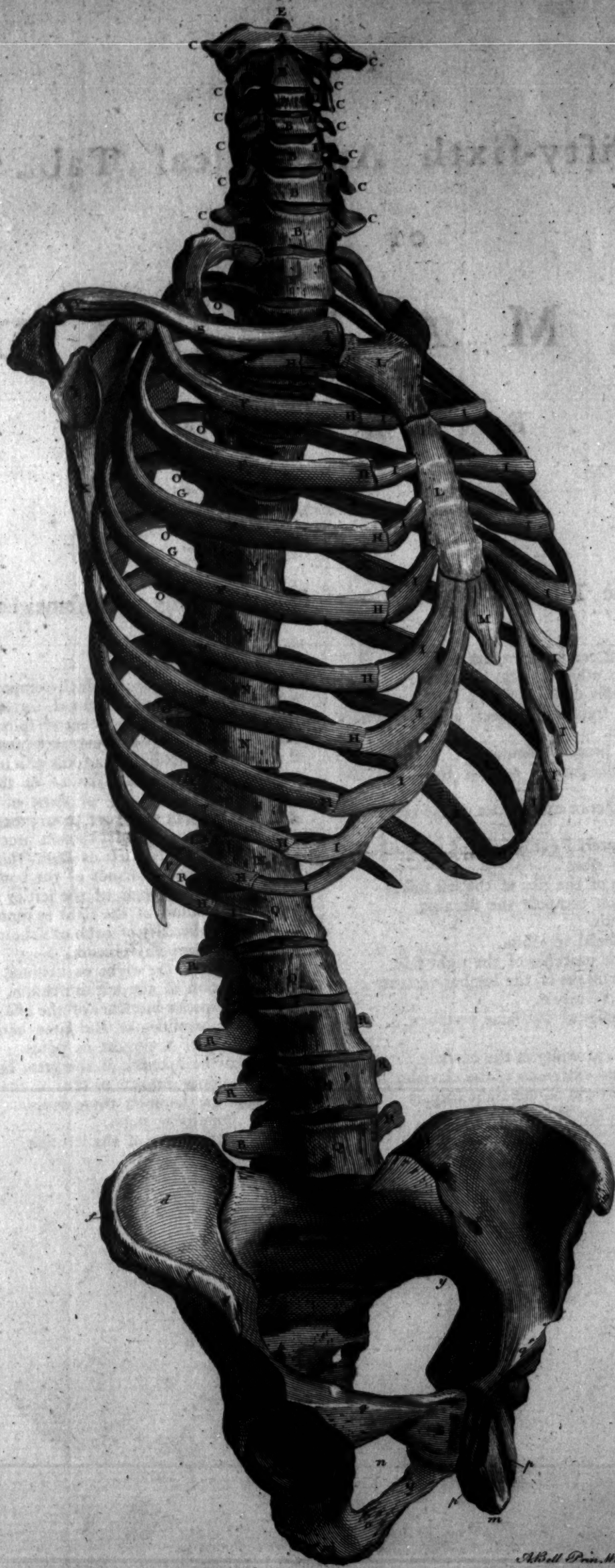
Represents the Anterior and Posterior Surfaces of the different Classes of the Teeth.

- 1 2. A fore and back view of the two anterior dentes incisivi of the lower jaw.
 3 4. The similar teeth of the upper jaw.
 5 6. A fore and back view of the dentes canini.
 7 8. The anterior molares.
 9 10 11. The posterior molares.
 12. A dens incisivus, the root of which is of a zig-zag shape.
 13. Two coronae, covered with enamel, on one common root.
 14. A tooth with all the roots bended to one side;
 15. Is singular for the size and length of its roots;
 16. Is a twin, both on account of its body and one of its roots: It is also considerable in size.

FIGURE XVI.

Represents the External Surface of the Os Hyoides.

- A The middle of the body of the os hyoides.
 B B Two small pits, where muscles arising from the trunk are fixed.
 C C Two other prints, where muscles descending from the head are fixed.
 D D The extremities of the base which are joined to the cornua of the bone.
 E E The great cornua of the os hyoides.
 F F The posterior part of the cornua.
 G G The tuberosities at the extremities of the cornua.
 H H The small cornua or appendices of the os hyoides.



A. Bell Pinx. W. A. Sculpsit.

T H E

Fifty-sixth Anatomical Table

OF THE

HUMAN BODY

EXPLAINED.

REPRESENTS the Trunk of the Body, as seen Anteriorly, and somewhat Laterally.

- | | |
|--|---|
| A The middle of the first cervical vertebra. | & The acromion. |
| B B The bodies of the six other cervical vertebræ. | a a The different pieces which compose the os sacrum. |
| C C The transverse processes of these vertebræ. | b b The holes in the internal surface of the os sacrum, |
| D D The hole in each transverse process which transmits the vertebral artery and vein. | through which an equal number of spinal nerves run. |
| E The upper part of the processus dentatus. | c c The connection between this bone and the two ossa ilia. |
| F F The outer and middle part of each of the ribs of the right side. | d d The internal surface of the ossa innominata. |
| G G The internal and posterior extremities of the ribs of the right side. | e Part of the external surface of the right os ilium. |
| H H The external and anterior extremities of these ribs. | f f The external edge, or spine of the right os ilium. |
| I I The cartilages of the ribs. | g g The anterior superior spinous processes of the ossa ilia. |
| K K The internal surface of the ribs of the left side. | h h The anterior inferior spinous processes of these bones. |
| L L The two pieces which compose the sternum. | i The canal of the left os ilium, through which the blood- |
| M The cartilago enfiformis. | vessels pass into the substance of the bone. |
| N N The bodies of the dorsal vertebræ. | k The spinous process of the left os ischium. |
| O O Part of the transverse processes of the right side. | l The acetabulum of the right os innominatum. |
| P P The intermediate cartilages of the lumbar vertebræ. | m m The tuberosity of each os ischium. |
| Q Q The bodies of these vertebræ. | n The foramen thyroideum. |
| R R The transverse processes of the same vertebræ. | o The crus of the right os ischium. |
| S The right clavicle. | p p A portion of the left os ischium. |
| T The internal or sternal extremity of the clavicle. | q q The superior branches of the ossa pubis. |
| V The external or humeral extremity of the clavicle. | r r The tuberosities of the same bones. |
| X The inferior anterior margin of the right scapula. | s The body of the right os pubis. |
| Y The glenoid cavity of the scapula. | t The inferior opening of the great branch of the os pubis. |
| Z The coracoid process. | u The inferior branch or crus of the os pubis, which assists |
| | in forming the foramen thyroideum. |
| | x The symphysis pubis. |
| | y The sciatic niche of the left side. |

T H E

T H E

Fifty-seventh Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

REPRESENTS a View of the Posterior Part of the Skeleton.

A The upper part of the first cervical vertebra.
 B One of the oblique, and
 C One of the transverse processes of this bone.
 D Muscular prints on the back-part of this vertebra.
 E E The spinous processes of the six other cervical vertebrae, of which the four first are bifurcated.
 F F The oblique processes of these vertebrae.
 G G The transverse processes.
 H H The spinous processes of the three first vertebrae of the back.
 I I The spinous processes of the six middle vertebrae, which are long, and sloping downwards over each other.
 K K Spinous processes of the three last dorsal vertebrae, which are short and straight.
 L L The transverse processes of all the dorsal vertebrae.
 M M The oblique processes of all these vertebrae.
 N N The spinous processes of the lumbar vertebrae.
 O O The posterior part of the transverse processes of these vertebrae.
 P P The oblique processes of the same vertebrae.
 Q Q The bodies of the same bones.
 R R The spinous processes of the os sacrum.
 S S The lateral and superior tuberosities of this bone.
 T The superior orifice of that part of the spinal canal which belongs to the os sacrum.

V V One of the superior oblique processes of the os sacrum.
 X X The holes in the back-part of the os sacrum, which transmit small vessels and nerves to the neighbouring parts.
 Y Y The eminences and cavities at the lateral parts of this bone.
 Z Z The cornua of the os sacrum.
 & The inferior orifice of the spinal canal.
 a a The external surface of the os coccygis.
 b b The posterior extremity of the ribs.
 c c The neck of the ribs.
 d d The angle of the same bones.
 e e The cartilages of the false ribs.
 f The external surface of the os ilium.
 g g The posterior spinous processes of this bone.
 h The great tuberosity of the same bone.
 i The spine of this bone.
 k A portion of the anterior tuberosity of this bone.
 l The posterior edge of the acetabulum.
 m The ischiatic niche.
 n n The spinous processes of the ossa ischia.
 o A portion of the internal surface of the superior branch of the ossa pubis.
 p The tuberosity of the os ischium.
 q The internal surface of the branch of this bone.
 r The foramen ovale seen from behind.

T H E

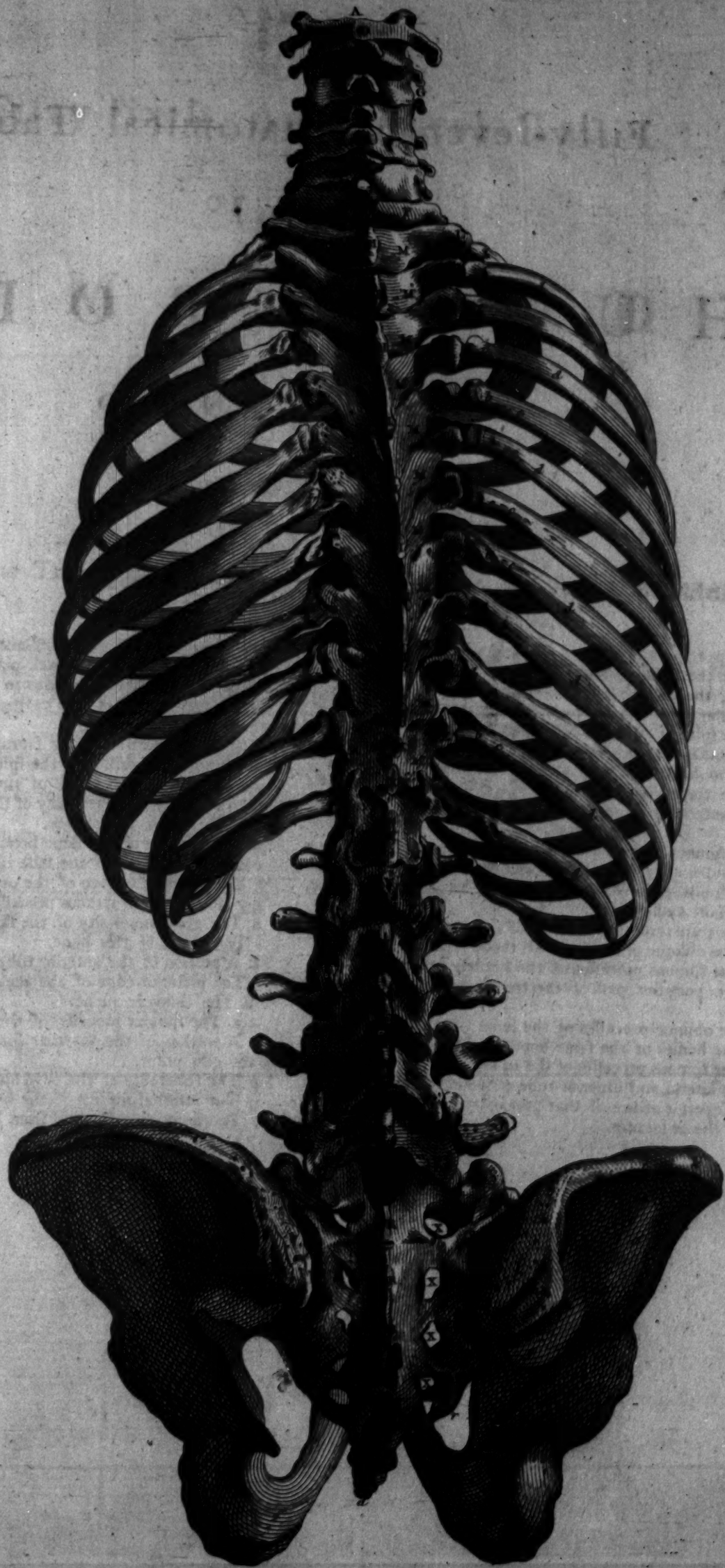


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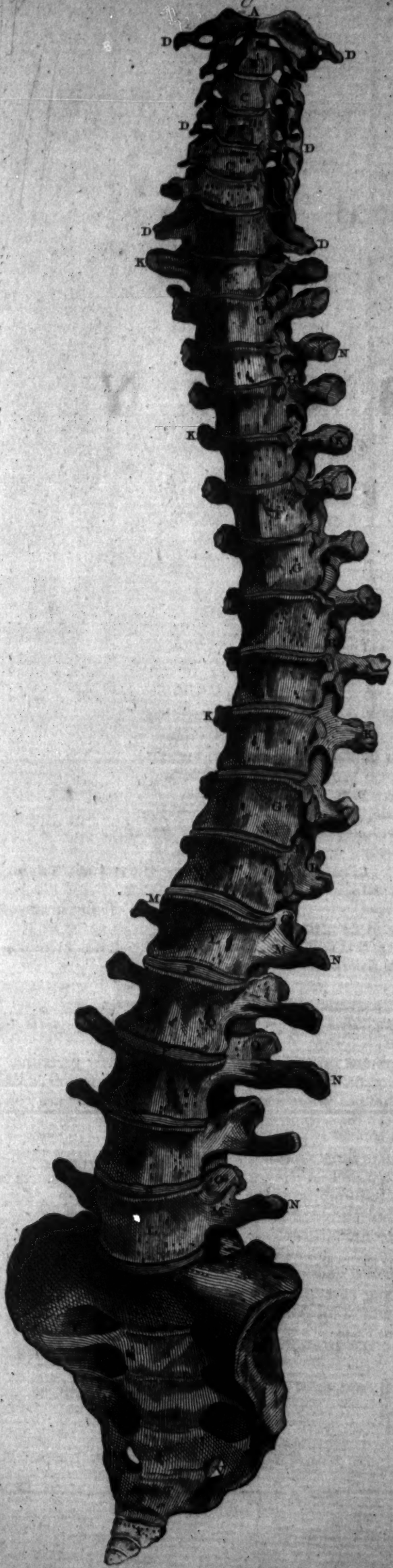
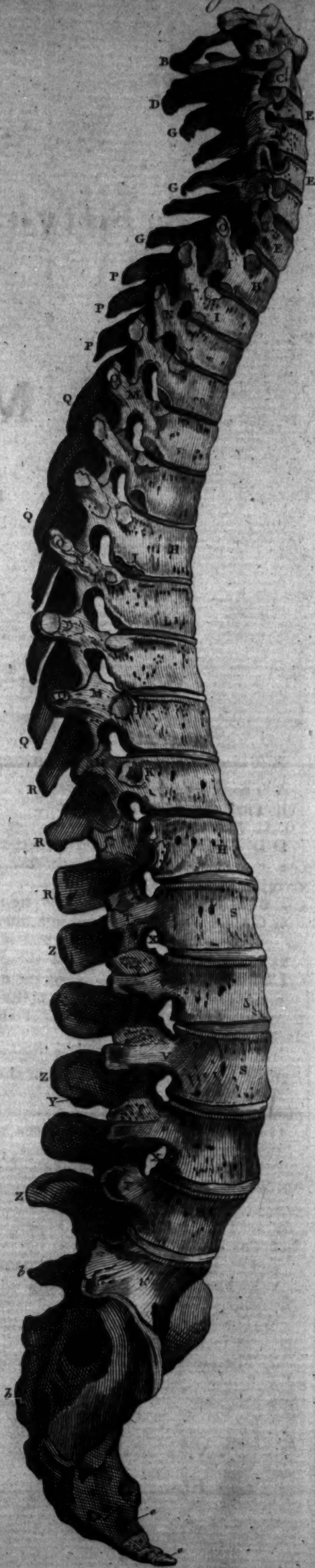


Fig. 2. Pl. 99.



T H E

Fifty-eighth Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

REPRESENTS Two Views of the Spine.

FIGURE I.

A View of the Anterior and Left Side of the Spine.

- A The first cervical vertebra.
 B The second cervical vertebra.
 C C The bodies of the five other cervical vertebrae.
 D D The transverse processes of the vertebrae of the neck.
 E E The oblique processes of the left side of the cervical vertebrae.
 F F The bodies of the dorsal vertebrae.
 G G The small cavities in the sides of the dorsal vertebrae, for receiving the heads of the ribs.
 H H The oblique processes of the dorsal vertebrae.
 I I The transverse processes of the dorsal vertebrae.
 K K The small depressions at the points of the transverse processes, to which the tubercles of the ten uppermost ribs are fixed.
 L L The bodies of the lumbar vertebrae.
 M M The transverse processes of the lumbar vertebrae.
 N N The extremities of these processes, where muscular prints are observed.
 O O The oblique processes of the lumbar vertebrae.
 P P The intervertebral cartilages.
 Q Q Many small holes of different sizes, for the passage of blood vessels and ligamentous fibres into the substance of the bones.
 R R The lateral and superior parts of the os sacrum.
 S The middle of this bone.
 T The inferior extremity of the same bone.
 V V The holes in the anterior part of the os sacrum, which give passage to some of the largest nerves of the body.
 X The lateral part of the os sacrum which is connected with the corresponding os ilium.
 Y The anterior part of the os coccygis.

FIGURE II.

A View of the Right Side of the Spine.

PART III.

B b

T H E

- A The middle of the first cervical vertebra.
 B The posterior part of the same vertebra.
 C The body of the second cervical vertebra.
 D The spinous process of the same bone.
 E E The five other cervical vertebrae.
 F F The oblique processes of these vertebrae.
 G G The spinous processes of the same bones.
 H H The bodies of the dorsal vertebrae.
 I I The small cavities in these vertebrae, where the condyles, or heads of the ribs, are connected.
 K K The small cavities for the articulation of the heads of the eleventh and twelfth ribs.
 L L The superior and inferior notches of the dorsal vertebrae, through which the spinal nerves pass.
 M M The oblique processes of these vertebrae.
 N N The transverse processes of the same bones.
 O O The articular depressions upon the anterior parts of these processes.
 P P The spinous processes of the three first dorsal vertebrae.
 Q Q The spinous processes of the six middle dorsal vertebrae.
 R R The spinous processes of the three last: They are considerably shorter than those of the preceding.
 S S The bodies of the five lumbar vertebrae.
 T T The transverse processes of these vertebrae.
 V V The notches in the superior and inferior parts of these bones for the transmission of the lumbar nerves.
 X X The holes formed by the meeting of these notches.
 Y Y The oblique processes of the lumbar vertebrae.
 Z Z The spinous processes of the same bones.
 & The superior and anterior part of the os sacrum.
 a The inferior part of this bone.
 b b The spinous processes of the same bone.
 c c The muscular prints of this same bone.
 d d The oblong surface, by which the os sacrum is joined to that of the os ilium.
 e e The different pieces which compose the os coccygis.

T H E
Fifty-ninth Anatomical Table
O F T H E
H U M A N B O D Y
E X P L A I N E D.

VIEWS of the different Vertebrae.

FIGURE I.

The Inferior Surface of the *Atlas*, or first Vertebra of the Neck.

- A The anterior part of the *atlas*, or first vertebra of the neck.
- B B The oblique inferior processes of this vertebra.
- C A small eminence, under the form of a muscular impression, on the posterior part of the same vertebra.
- D D The transverse processes of this bone, which terminate in a tuberosity.
- E E The inferior orifice of the oblique holes situated at the roots of these processes.
- F F The inferior slopes or excavations of the first vertebra of the neck.
- G The large vertebral hole, through which the spinal marrow passes.

FIGURE II.

Shews the Superior Surface of the same Vertebra.

- A The anterior part of the *atlas*, or first vertebra of the neck.
- B B Its oblique superior processes.
- C C The protuberances, or ligamentous impressions, situated under the internal margin of these processes.
- D D The superior orifice of the oblique holes, situated near the root of the transverse processes. These holes transmit the vertebral arteries.
- E E The external margin of the transverse processes: It is rounded into an eminence.
- F F The posterior slopes where the vertebral arteries are reflected, in their ascent to the cranium.
- G The spinous process on the posterior part of the first vertebra of the neck.
- H The large vertebral hole of the *atlas*. It is divided by a transverse ligament into two unequal portions, the anterior, or smallest of which is designed for the reception of the odontoid process of the second vertebra, and the other portion transmits the spinal marrow.

FIGURE III.

Gives a second view of the Superior Surface of the *Atlas*, or first Cervical Vertebra, but in a position nearly

horizontal, and most favourable for bringing into view the small Articular Cavity, which receives the eminence of the Odontoid Process of the second Vertebra.

- A The small articular cavity of the anterior and internal surface of the *atlas*. It is into this cavity that the odontoid process is received.
- B B The superior oblique processes: They are very hollow, and receive the occipital condyles.
- C C Protuberances seen interiorly below these processes: The transverse ligament, which divides the large vertebral hole into two unequal portions, is attached to these protuberances.
- D D The posterior slopes where the vertebral arteries are reflected, that they may enter the cranium. The course which they describe along these slopes, defends them against all accident and danger of compression.
- E E The oblique holes situated at the roots of the transverse processes.
- F F The extremities of these processes, which terminate in the form of a tuberosity.
- G A muscular impression situated on the posterior part, or at the spinous process of the first vertebra.
- I I The large vertebral hole.

FIGURE IV.

The whole Superior Surface of the second Vertebra of the Neck, seen anteriorly and posteriorly.

- A The superior part of the odontoid process of the second vertebra.
- B B Its superior oblique processes.
- C C Its transverse processes.
- D D The superior slopes or excavations of this bone.
- E E A portion of the inferior oblique processes.
- F F The extremities of the spinous processes of a forked shape.
- G G The muscular impressions on the two sides of the spine.

FIGURE V.

The whole Anterior, Middle-inferior, and Posterior-inferior Surfaces of the second Vertebra.

A The

Fig. 1.

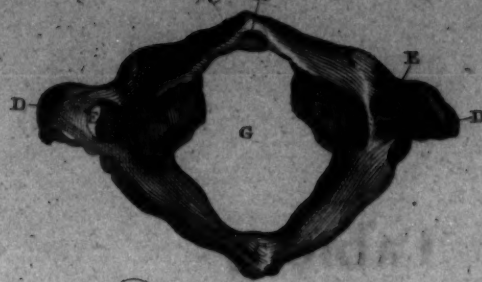


Fig. 2.

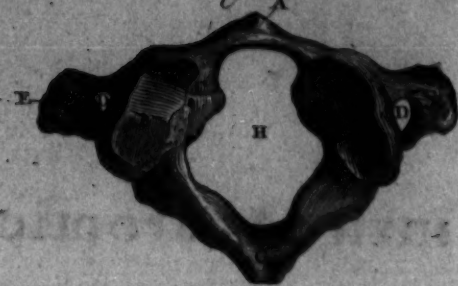


Fig. 3.



Fig. 4.

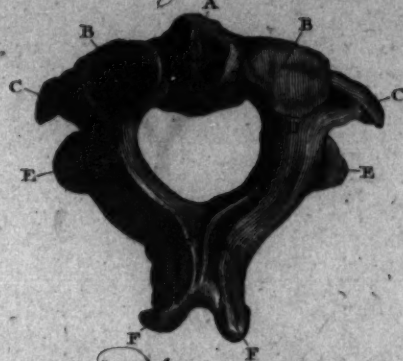


Fig. 6.

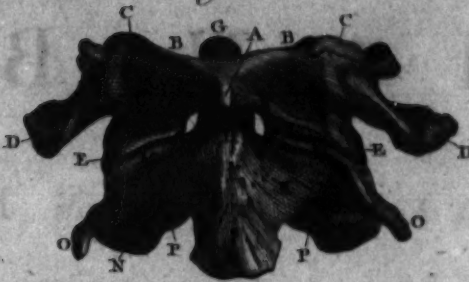


Fig. 8.

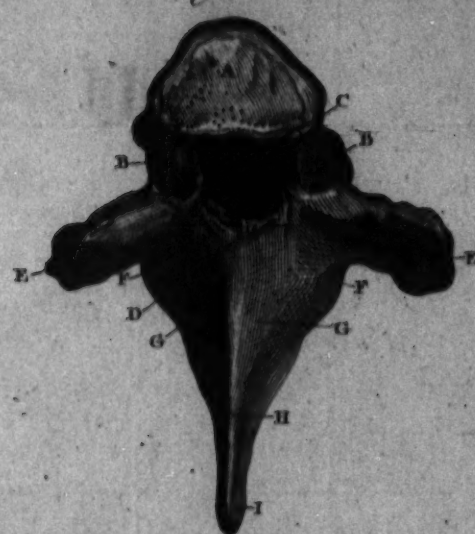


Fig. 5.

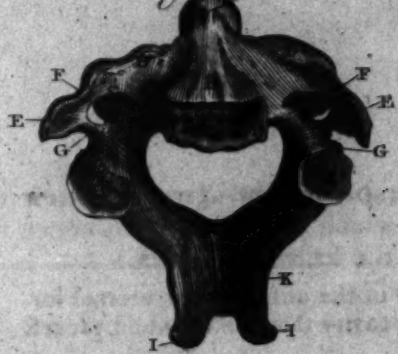


Fig. 7.

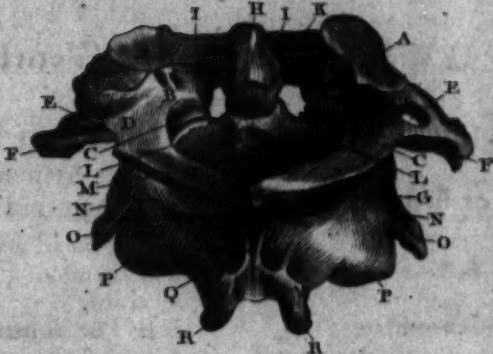


Fig. 9.

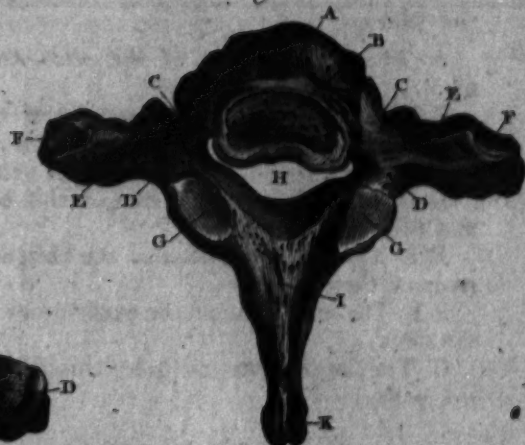


Fig. 10.

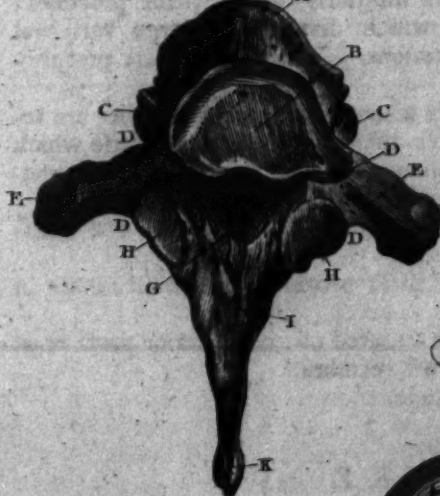


Fig. 11.

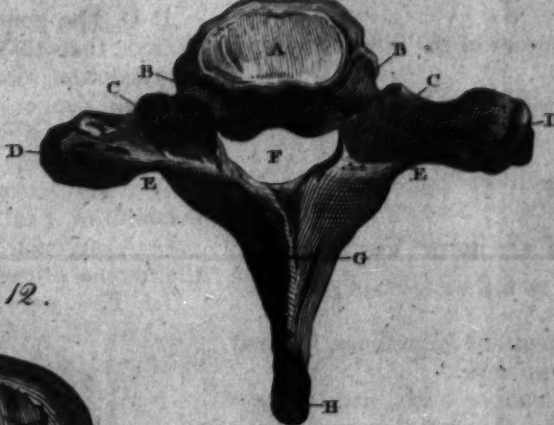


Fig. 12.

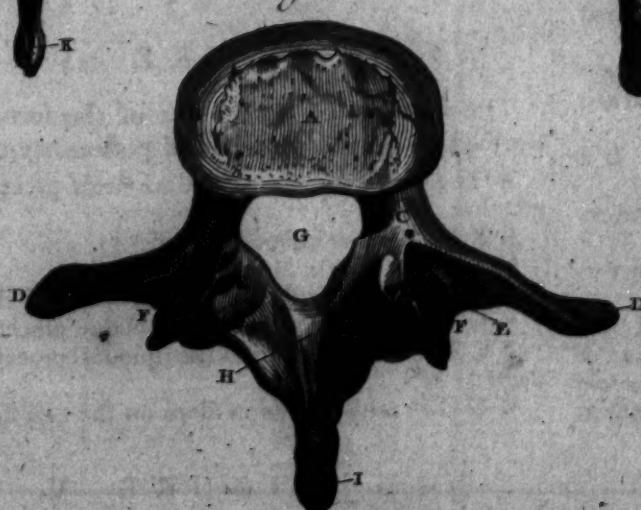
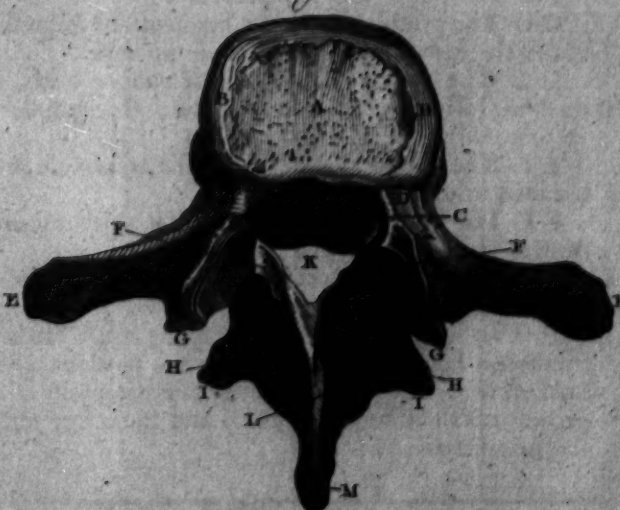


Fig. 13.



- A The superior part of the odontoid process.
- B The anterior and middle surface of the body of the second vertebra.
- C The inferior surface of the same body; it is somewhat convex.
- D D The anterior margin of the superior oblique processes.
- E E The extremity of the transverse processes.
- F F The oblique holes situated at the root of these processes.
- G G The inferior slopes or excavations.
- H H The inferior oblique processes.
- I I The bifurcation of the spinous process.
- K A furrow, on the internal surface of this process.

FIGURES VI. VII.

The Connection and Conformity of the two first Vertebrae with each other.

FIG. VI.

The Anterior Surface of the first and second Vertebra of the Neck, articulated one with another.

- A The eminence, or anterior impression of the body of the atlas.
- B B The two superior excavations of this vertebra.
- C C The anterior margin of the superior oblique processes of the same vertebra.
- D D The extremities of the transverse processes of the same.
- E E The anterior margin of its inferior oblique processes.
- F F Its inferior hollows.
- G The extremity of the odontoid process of the second vertebra.
- H The base of the same process.
- I The small eminence of the middle part of the body of the second vertebra.
- K K The fossae, or impressions, excavated laterally upon this body.
- L The convexity of the inferior part of the same body.
- M M The anterior margin of the superior oblique processes of the second vertebra.
- N N Its inferior oblique processes.
- O O Its transverse processes.
- P P Its inferior hollows.

FIG. VII.

The Posterior Surface of the same Bones, articulated in the preceding Figure.

- A A The cavity of the superior oblique processes of the atlas.
- B B The ligamentous protuberances, situated interiorly below the inferior margin of these processes.
- C C The posterior margin of the inferior oblique processes of the atlas.
- D D The posterior hollows of this vertebra, where the vertebral arteries, and the tenth pair of nerves pass.
- E E The superior orifice of the holes of the transverse processes of the same vertebra.
- F F The extremity of these processes.
- G An eminence of the first vertebra, in the form of a spinous process.
- H The superior extremity of the odontoid process.
- I I The ligamentous impressions upon this extremity.
- K The neck of the odontoid process; it is tied by a lateral ligament.
- L L The posterior margin of the superior oblique processes of the second vertebra.
- M The middle of the large vertebral hole of the same bone.
- N N The posterior orifice of the holes situated at the root of the transverse processes of the same bone.
- O O The extremities of these processes.
- P P The posterior margin of the inferior oblique processes of the second vertebra.

- Q A crest projecting from the superior part of the spinous process of this bone.
- R R The extremities of this process, on which there are muscular impressions.

FIGURES VIII. IX.

Shew one of the first Dorsal Vertebrae. There being scarcely any remarkable difference in the general structure of the Vertebrae of the Back, the explanation of one only is sufficient for the understanding of the rest.

FIG. VIII.

An anterior and posterior view of the Superior Surface of the first or upper Dorsal Vertebra.

- A The superior surface of the body of this vertebra, which is irregularly triangular.
- B B Its superior oblique processes.
- C A portion of the body of this vertebra which assists in the formation of the vertebral hole.
- D The thin, sharp margin of the vertebral hole.
- E E The posterior part of the transverse processes.
- F F The inferior margin of the inferior oblique processes.
- G G The posterior hollows.
- H The prominent line of the spinous process of this bone.
- I The extremity of this process, which is commonly thin.

FIG. IX.

Represents the Inferior Surface of the Vertebra of the preceding Figure.

- A The anterior part of the body of this vertebra.
- B The inferior surface of the same body; it is bordered with a small osseous lamina, which is an epiphysis in young subjects.
- C C The superior excavations.
- D D The inferior.
- E E The transverse processes.
- F F The small articular cavities, which receive the tuberosities of the ribs.
- G G The inferior oblique processes.
- H The large vertebral hole.
- I The interior fossa, or groove of the spinous process.
- K The inferior extremity of this process.

FIGURES X. XI.

These two Figures represent another Vertebra of the Back taken from the inferior ranks, to shew the minute differences which may be found between two Dorsal Vertebrae, according as they are situated higher or lower. It is seen at once, that the Body of this Vertebra is of a larger size. The same difference will be observed in the proportion of each of the other parts, by comparing them with their corresponding parts in a Superior Vertebra.

FIG. X.

The Inferior Surface of the Vertebra shewn anteriorly and posteriorly.

- A The anterior part of the body of this vertebra.
- B The inferior surface of this body, which is of a somewhat triangular figure.
- C C A portion of the superior oblique processes.
- D D The superior and inferior excavations.
- E E The transverse processes.
- F F The articular cavities which receive the tuberosities of the ribs.
- G The superior orifice of the large vertebral hole.
- H H The inferior oblique processes.
- I The superior-internal part of the spinous process.

K The

K The extremity of this process, which forms a small tuberosity.

FIG. XI.

The Superior Surface of the preceding Vertebra; it is viewed in a plain almost horizontal, which shews distinctly the oval form of the Body of this Bone.

- A The superior oval surface of the body of this vertebra.
- B B The superior slopes, or hollows.
- C C The superior oblique processes.
- D D The posterior part of the transverse processes.
- E E A portion of the inferior excavations.
- F The large vertebral hole.
- G The prominence which reaches exteriorly along the spinous process.
- H The tuberosity which terminates this process.

FIGURE XII.

The Inferior Surface of the third Lumbar Vertebra.

- A The middle of the inferior surface of the body of the third lumbar vertebra.
- B B The osseous lamina which borders the whole circumference of this surface.
- C C The inferior excavations.
- D D The transverse processes.
- E E The inferior oblique processes.

- F F The superior excavations.
- G G The large vertebral hole.
- H A small groove on the internal surface of the spinous process.
- I The rounded extremity of this process.

FIGURE XIII.

The same Lumbar Vertebra, represented in a plane nearly horizontal: The whole Superior Surface is seen anteriorly and posteriorly.

- A The centre of the body of this vertebra, which is very spongy.
- B B The small cartilaginous lamina, which borders the whole of this surface.
- C The portion of the body of this bone, which forms part of the vertebral hole.
- D D The superior excavations.
- E E The extremity of the transverse processes.
- F F The superior oblique processes.
- G G The inferior excavations.
- H H The posterior excavations.
- I I The inferior oblique processes.
- K The large vertebral hole.
- L The prominent line which extends along the exterior part of the spinous process.
- M The extremity of this process, which is rounded in the form of a tuberosity.

E H T

Fig. 1.

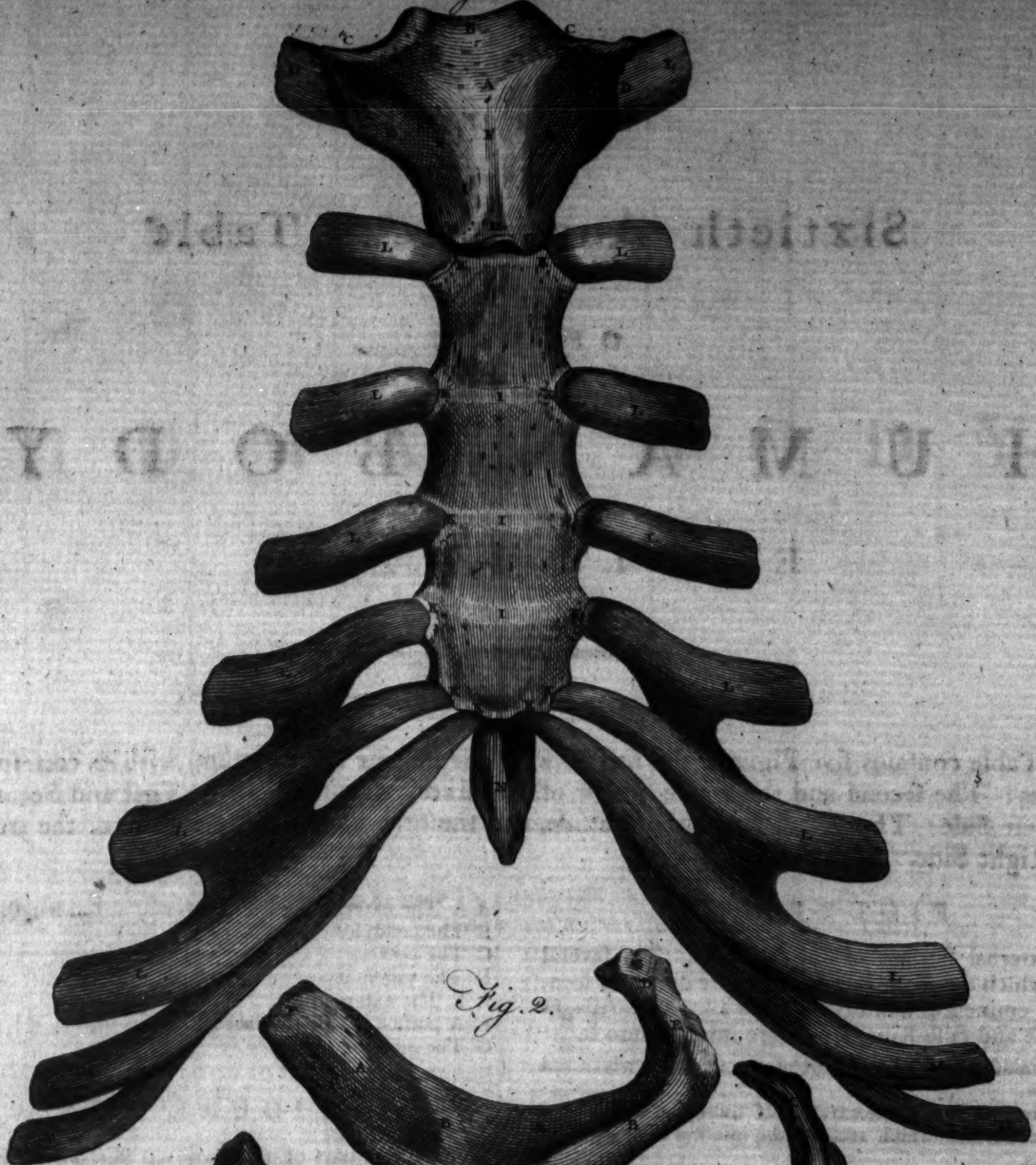


Fig. 2.



Fig. 3.



Fig. 4.



Fig. 5.



T H E

Sixtieth Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

THIS Table contains five Figures, the first of which represents the Sternum, with its corresponding Cartilages: The second and third give a view of the External Surface of the First and Second Rib of the Left Side: The fourth shews the Outside, and the fifth the Inside of the last of the true Ribs of the Right Side.

FIGURE I.

The External Surface of the Sternum. The several pieces of which this Bone is composed, are distinctly seen, with their eminences and cavities, and also the Cartilages of the true and false Ribs, which are inserted into it.

A The middle and superior part of the sternum, which is a little hollow.

B The fork, or superior excavation of this osseous piece.

C C The cavities which receive the internal extremities of the clavicles.

D D The lateral parts of the sternum, into which the cartilages of the first or true ribs are inserted, on each side.

E E The hollows, where a part of the large pectoral muscles is inserted.

F The prominent line, or muscular impression, in form of a triangle, upon the middle of the first or superior piece of the sternum.

G G The demi-cavities in the inferior part of this piece.

H The extremity of the same piece, where it is united with the second.

I I The transverse lines which are found on the surface of the second piece: They mark the points of re-union of the different bits of which this piece has been originally formed.

K K The small lateral cavities of this second piece, for the reception of the cartilages of the true ribs.

L L, &c. The cartilages of the true ribs.

M M The cartilages which correspond to the two first false ribs.

N The xyphoid cartilage.

FIGURE II.

The External Surface of the first Rib of the Left Side.

A A The superior external part of the first rib.

B B The inequalities observed on the external surface.

C Its condyle.

D The neck of this rib.

E Its tuberosity.

F Its anterior extremity.

FIGURE III.

The External Surface of the second true Rib of the Left Side.

PART III.

A A The external surface of this rib, at full length.

B The condyle.

C The cervix.

D The tuberosity.

E E The external lip.

F A portion of the internal lip.

G The anterior extremity.

FIGURE IV.

The greater part of the External Surface of the last of the true Ribs of the Right Side. Some part of the Internal Surface is likewise seen on its posterior extremity.

A A The whole external surface of the body of this rib.

B B A part of its internal surface.

C C The two facets which terminate the condyle.

D The small superficial line between the two facets.

E The neck of the rib.

F A part of the tuberosity of this rib.

G The origin of the hollow fossa on the internal surface of the same rib.

H H A portion of the external lip of this bone.

I The anterior extremity of the same bone.

FIGURE V.

Almost the whole of the Internal Surface of the preceding Rib.

A A The internal surface of the last of the true ribs of the right side.

B A portion of its external surface.

C The condyle.

D A ligamentous impression, which extends from this part of the rib as far as the corresponding transverse process.

E The cervix of the rib.

F The tuberosity.

G Another muscular impression under the tuberosity.

H The inferior edge of the rib, under which is the depression, or fossa.

I I The groove, or fossa, at the internal and inferior margin of the bone.

K The margin of the external lip.

L The internal extremity.

C c

T H E

T H E

Sixty-first Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

THIS Table gives a view of all the Ribs of the Right Side in their natural position. They are detached indeed from the Spine; but they preserve, notwithstanding, their true situation, as is easily perceived. They are found fixed at their Anterior part, by the Cartilages, which extend as far as the Sternum. In viewing them on their Posterior part, their External Surface only is seen; but in advancing beyond the Angle of these Bones, they present their Internal Surface, as far as their connection with the Cartilages, which are as it were a continuation, or sort of Epiphysis. It is easy to distinguish the Adhesions which these form with the Sternum. This last Bone presents a profile, the whole extent of its Internal Surface. Lastly, the Ribs are seen where there is a double Tuberosity.

A A A The middle external part of the ribs.
B B B The condyle of each rib.
C C C The small facet observed on each condyle: It is here distinguished by a small superficial line.
D D D The cervix of the ribs.
E E E The small openings situated at the posterior part of each of these bones, for the transmission of vessels.
F F F The tuberosity of the ribs which is double in each.
G G G The inferior angle of each rib.
H H H Their middle and internal part.
I I I The groove, or fossa, situated interiorly at the inferior part of each rib, for the reception of the intercostal artery.
K K K The anterior extremity of the ribs; it is very broad and thin.
L L L The cartilages of the true ribs.
M M The cartilages of the false ribs.
N N N The union of the cartilages with the sternum.
O O O The connection which the cartilages of the false ribs have with each other.
P The cartilage of the fourth of the false ribs, which is infolded.
Q The middle internal part of the superior piece of the sternum, which is a little excavated, and furnished with several irregular holes for the passage of vessels.

R The superior part of this bone, called the Furcula.
S S The superior cavities of the same bone: They are incrust-
 ed with a cartilaginous substance, for the reception of the cla-
 vicles.
T T The lateral cavities of the same piece, which are some-
 what irregular: They serve for the insertion of the cartilages of
 the two first ribs.
V The inferior part of the first piece of the sternum, which
 is united with the second piece of the same bone.
X X The demi-cavities, situated on the lateral and inferior
 part of this first piece.
Y Y The internal surface of the second piece of the ster-
 num, which is somewhat concave, and on which several holes
 are found, for the passage of vessels which penetrate its sub-
 stance.
Z Z The small lateral cavities of the right rib, which are oc-
 cupied by the cartilages of the true ribs.
& & The corresponding cavities of the left side.
a The superior part of the second piece of the sternum, the
 surface of which is united to that of the first.
b Its inferior portion, at the extremity of which the xyphoid
 cartilage is situated.

T H E

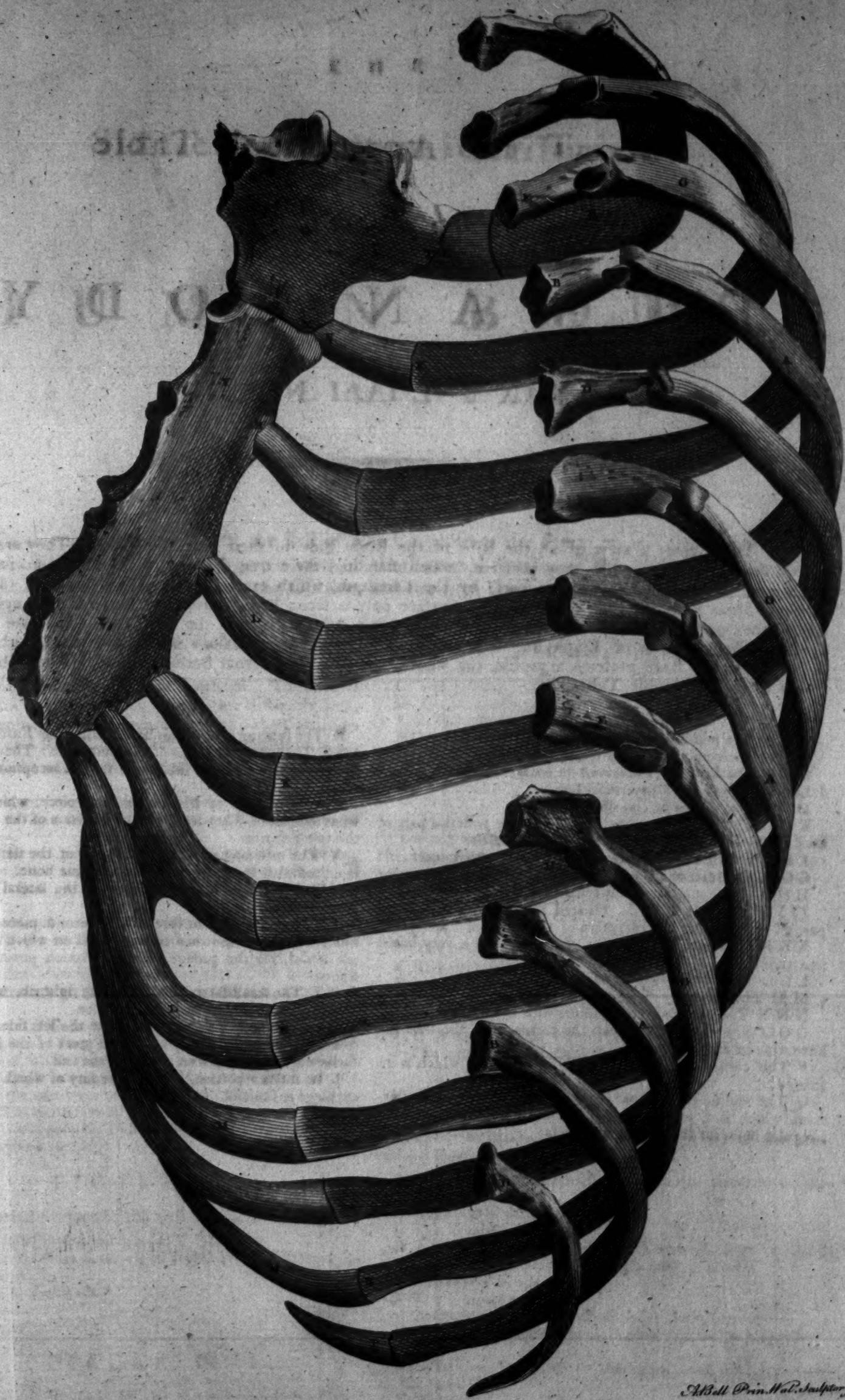


Fig. 1.



Fig. 2.

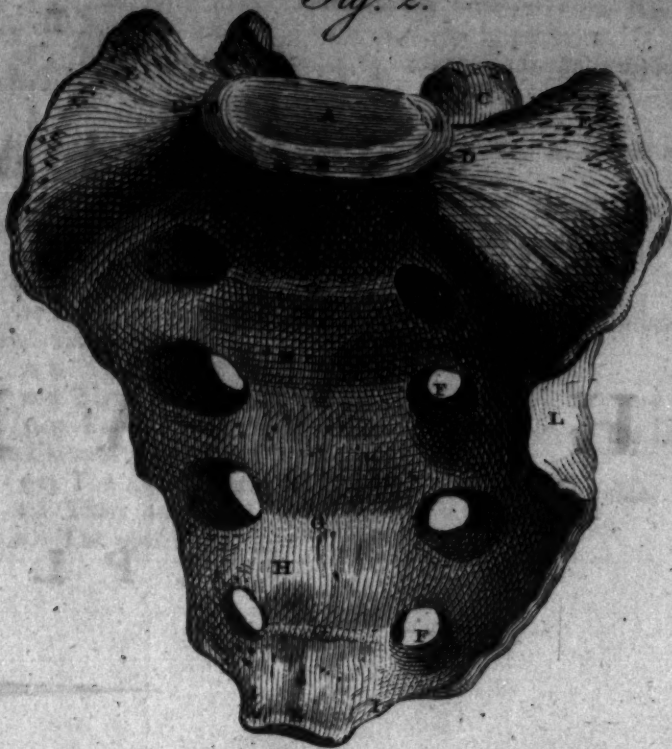


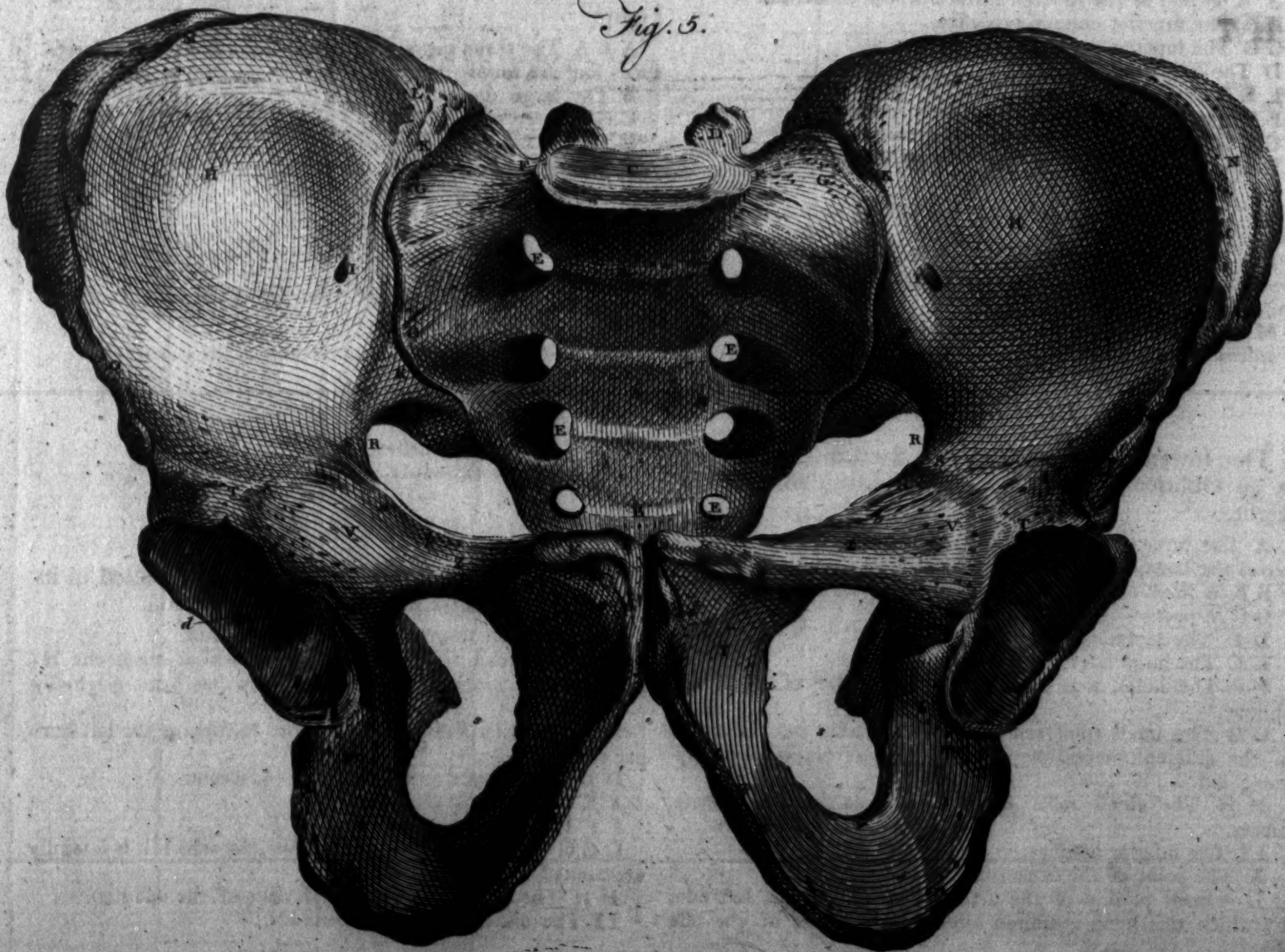
Fig. 3.



Fig. 4.



Fig. 5.



T H E

Sixty-second Anatomical Table

OF THE

H U M A N B O D Y

E X P L A I N E D.

THIS Table contains five Figures, the first of which represents the External Surface of the Os Sacrum: The second, its Internal Surface: The third and fourth shew the External and Internal Surfaces of the Os Coccygis; and the fifth, the Internal Surface of the Pelvis.

FIGURE I.

Shews about three fourths of the External Surface of the Os Sacrum.

- A A portion of the superior surface of the os sacrum.
- B B The superior oblique processes.
- C C The superior notches.
- D The origin of the canal.
- E E The spinous processes.
- F F The appendages, or cornua.
- G G The holes, four on each side.
- H The termination of the canal of the spinal marrow:
- I I The inferior notches.
- K The point of the os sacrum, which is united to the os coccygis.
- L L The eminences and cavities found over the whole convexity of the os sacrum, and which are so many ligamentous and muscular impressions.
- M A portion of the articular surface, by which the os sacrum is united to the ossa ilia.

FIGURE II.

The Internal Surface of the Os Sacrum, represented in an Oblique position, and turned a little towards the Right.

- A The surface, or superior part of the os sacrum, which receives the body of the last lumbar vertebra.
- B B A small osseous lamina which surrounds this surface.
- C C A portion of the oblique processes.
- D D The superior notches.
- E E The large lateral eminences.
- F F The holes, four on each side, the orifices of which are oblique.
- G G The small transverse lines, which point out the union of the different pieces, of which the os sacrum is originally composed.
- H H The small fossæ situated between each of these pieces.
- I I The inferior notches.
- K The point of the os sacrum.
- L A small portion of the articular surface of the left side, by which this bone is united laterally with those of the ossa ilia.

FIGURE III.

The External Surface of the Os Coccygis: Its position is Oblique, and inclined a little from Left to Right, in the same manner as the Os Sacrum, in the preceding Figure.

- A A A The three pieces which form the os coccygis: Sometimes four are found.
- B The large notch.
- C C The cornua.
- D D The lateral notches.
- E E The lateral processes.
- F The point, or inferior extremity.

FIGURE IV.

The Internal Surface of the Os Coccygis, inclined from Right to Left.

- A A A The three pieces which compose the os coccygis.
- B The large notch.
- C C The Cornua.
- D D The small notches.
- E E The lateral processes.
- I The inferior extremity, or point of the os coccygis.

FIGURE V.

The Internal Surface of the Pelvis, represented in its full extent, and in a position nearly horizontal.

- A The middle internal part of the os sacrum.
- B B The small transverse elevations, which mark the reunion of the pieces of which this bone has been originally composed.
- C The superior surface, which serves to support the last lumbar vertebra.
- D D The oblique processes of the os sacrum.
- E E The holes in this bone.
- F F Its superior notches.
- G G G G The margins of this bone, by which it is laterally articulated with the ossa ilia.
- H H The internal and middle surface of the ossa ilia.
- I I The orifice of the iliac conduits.

K K The

K K The posterior margins of the ossa ilia, by which they are united with the os sacrum.
 L L Part of the posterior eminence of these bones, which serves as a base to the posterior and superior spine.
 M M The internal margin of the ossa ilia.
 N N A part of their line, or crest.
 O O Their superior and anterior spines.
 P P Their anterior and inferior spines.
 Q Q The anterior notches.
 R R A large portion of the ischiatic notch.
 S S A portion of the iliac line, which is united to that of the os pubis.
 T T The large iliac sinuosity.
 V V A small elevation, which indicates the union of the os ilium with the os pubis.
 X X The superior part of the cotyloid cavity.
 Y Y The middle portion of the bodies of the ossa pubis.
 Z Z The middle of their superior branch.
 & & Their tuberosity.
 a a Their line or crest.
 b b The superior notch.
 c c The inferior notch.

d d A portion of the os pubis, which forms part of the cotyloid cavity.
 e e The fossie which are situated anteriorly on the body of the os pubis, and which are muscular impressions.
 f f The ligamentous margins, which form the symphysis of the ossa pubis.
 g The angle below the symphysis of these bones.
 h h Their inferior branch, which is united with that of the ossa ischia.
 i i The notch of these last bones, which contributes to the formation of the oval hole.
 k k Their spine.
 l l The inferior portion of the cotyloid cavity.
 m m The anterior part of the ossa ischia, a little laterally and externally.
 n n A portion of their tuberosity.
 o o Their branch.
 p p The muscular and cavernous impressions on the inferior and lateral part of this branch.
 q q The superior part of the branch of the ossa ischia.
 r r Their notch.
 s s The oval hole.

This Table contains five Figures, the first of which represents the External Surface of the Os Sacrum: The second its Internal Surface: The third and fourth show the External and Internal Surfaces of the Os Coccygis: and the fifth the Internal Surface of the Pelvis.

FIGURE III.

The External Surface of the Os Coccygis: its position is Oblique, and inclined a little from left to Right, as the same manner as the Os Sacrum, in the preceding Figure.
 A A The three pieces which form the coccygis: some times two are found.
 B B The large notch.
 C C The cartilage.
 D D The bony process.
 E E The spinal process.
 F F The point of union, which is united to the sacrum.

FIGURE IV.

The Internal Surface of the Os Coccygis: inclined from Right to Left.
 A A The three pieces which compose the coccygis.
 B B The large notch.
 C C The cartilage.
 D D The bony process.
 E E The spinal process.
 F F The point of union, or point of the os coccygis.

FIGURE V.

The Internal Surface of the Os Sacrum: inclined in an Oblique manner, and a little from Right to Left.
 A The small cavity, which is situated in the middle of the sacrum, and is the point of union of the coccygis.
 B B A small cavity, which is situated in the middle of the sacrum, and is the point of union of the coccygis.
 C C A portion of the sacrum, which is situated in the middle of the sacrum, and is the point of union of the coccygis.
 D D The large notch, which is situated in the middle of the sacrum, and is the point of union of the coccygis.
 E E The small cavity, which is situated in the middle of the sacrum, and is the point of union of the coccygis.
 F F The small cavity, which is situated in the middle of the sacrum, and is the point of union of the coccygis.

FIGURE I.

Shows above: three fourths of the External Surface of the Os Sacrum.
 A A portion of the superior surface of the os sacrum.
 B B The inferior surface of the os sacrum.
 C C The inferior surface of the os sacrum.
 D D The inferior surface of the os sacrum.
 E E The inferior surface of the os sacrum.
 F F The inferior surface of the os sacrum.
 G G The inferior surface of the os sacrum.
 H H The inferior surface of the os sacrum.
 I I The inferior surface of the os sacrum.
 K K The point of the os sacrum, which is united to the coccygis.
 L L The inferior surface of the os sacrum, which is united to the coccygis.
 M M The inferior surface of the os sacrum, which is united to the coccygis.
 N N The inferior surface of the os sacrum, which is united to the coccygis.
 O O The inferior surface of the os sacrum, which is united to the coccygis.
 P P The inferior surface of the os sacrum, which is united to the coccygis.
 Q Q The inferior surface of the os sacrum, which is united to the coccygis.
 R R The inferior surface of the os sacrum, which is united to the coccygis.
 S S The inferior surface of the os sacrum, which is united to the coccygis.

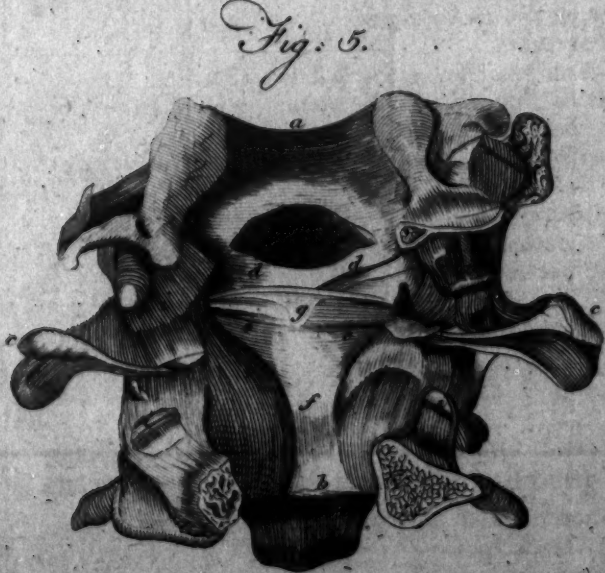
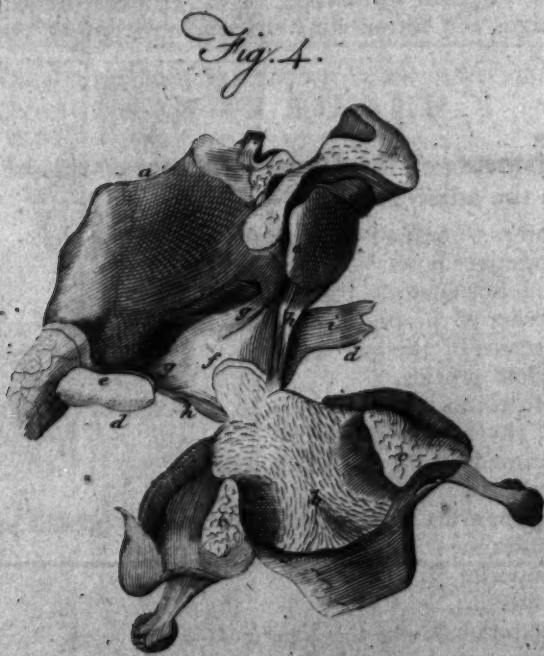
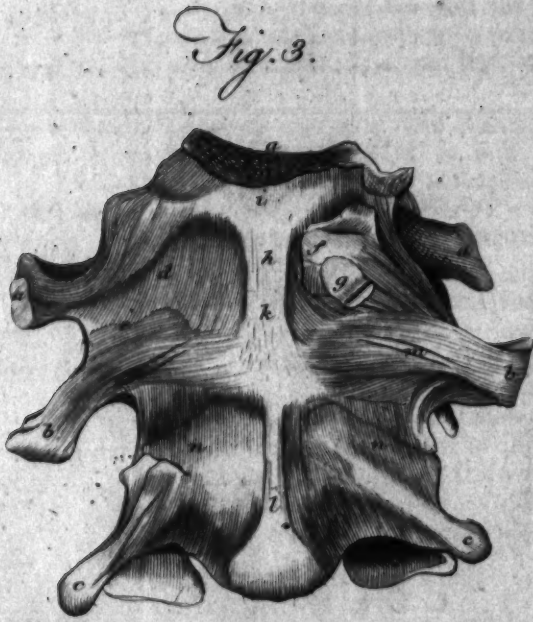
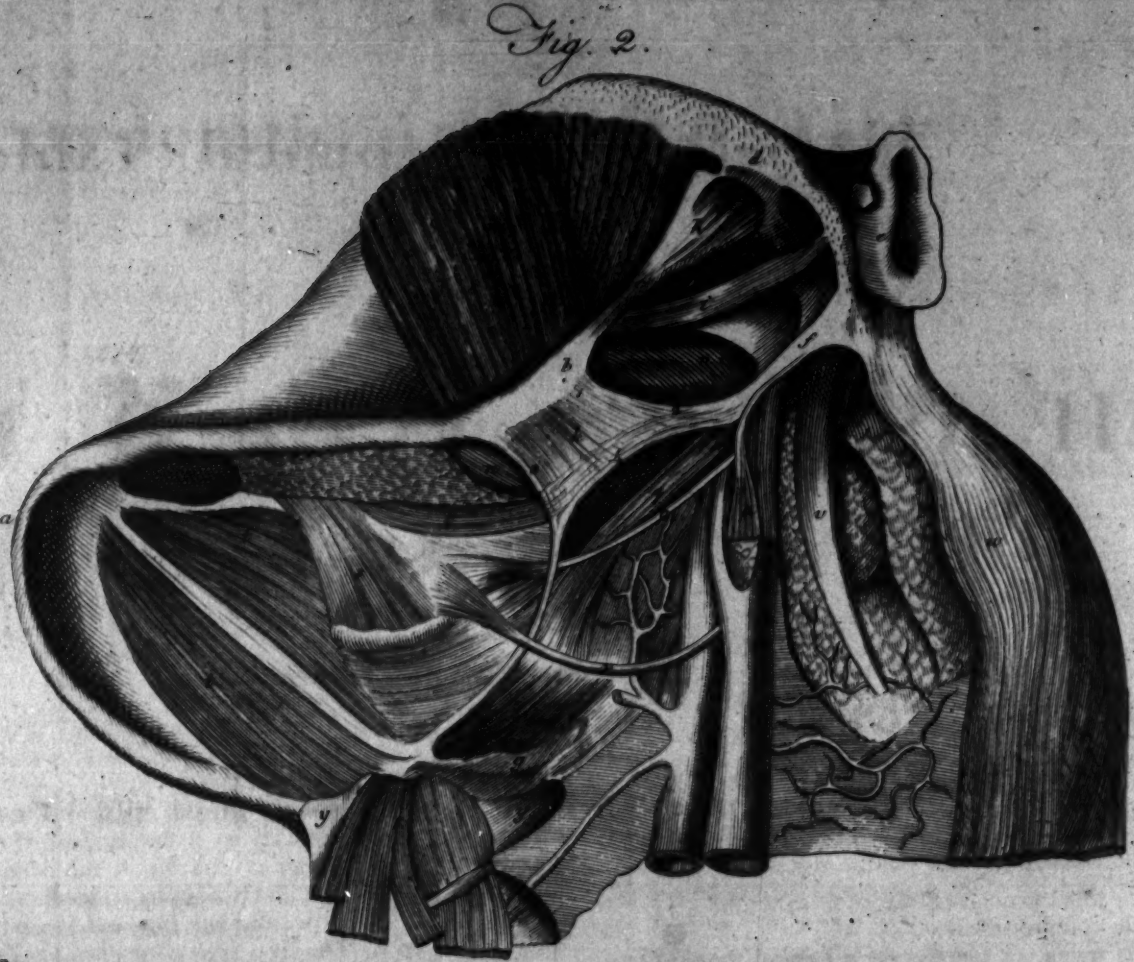
FIGURE II.

The Internal Surface of the Os Sacrum: inclined in an Oblique manner, and a little from Right to Left.
 A The small cavity, which is situated in the middle of the sacrum, and is the point of union of the coccygis.
 B B A small cavity, which is situated in the middle of the sacrum, and is the point of union of the coccygis.
 C C A portion of the sacrum, which is situated in the middle of the sacrum, and is the point of union of the coccygis.
 D D The large notch, which is situated in the middle of the sacrum, and is the point of union of the coccygis.
 E E The small cavity, which is situated in the middle of the sacrum, and is the point of union of the coccygis.
 F F The small cavity, which is situated in the middle of the sacrum, and is the point of union of the coccygis.
 G G The small cavity, which is situated in the middle of the sacrum, and is the point of union of the coccygis.
 H H The small cavity, which is situated in the middle of the sacrum, and is the point of union of the coccygis.
 I I The small cavity, which is situated in the middle of the sacrum, and is the point of union of the coccygis.
 J J The small cavity, which is situated in the middle of the sacrum, and is the point of union of the coccygis.
 K K The small cavity, which is situated in the middle of the sacrum, and is the point of union of the coccygis.
 L L The small cavity, which is situated in the middle of the sacrum, and is the point of union of the coccygis.
 M M The small cavity, which is situated in the middle of the sacrum, and is the point of union of the coccygis.
 N N The small cavity, which is situated in the middle of the sacrum, and is the point of union of the coccygis.
 O O The small cavity, which is situated in the middle of the sacrum, and is the point of union of the coccygis.
 P P The small cavity, which is situated in the middle of the sacrum, and is the point of union of the coccygis.
 Q Q The small cavity, which is situated in the middle of the sacrum, and is the point of union of the coccygis.
 R R The small cavity, which is situated in the middle of the sacrum, and is the point of union of the coccygis.
 S S The small cavity, which is situated in the middle of the sacrum, and is the point of union of the coccygis.

ДОКУМЕНТАЛЬНЫЕ СВИДЕТЕЛЬСТВА

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T H E

Sixty-third Anatomical Table

OF THE

H U M A N B O D Y

E X P L A I N E D.

FIGURE I.

THE Tubercle of the Os Jugale, with the Fovea situated between it and the Meatus Auditorius.

- a The jugal process of the os temporum.
- b The transverse tuber.
- c The fovea, or glenoid sinus behind that tuber.
- d d d The capsular membrane, produced from the intermediate cartilage, and surrounding the whole margin of the articulation.

FIGURE II.

The Ligaments of the Under Jaw, viewed on the Left Side, with the adjacent parts.

- a The anterior angle of the under jaw, or chin.
- b The posterior angle.
- c The posterior condyloid process.
- d The border of the zygomatic process of the os temporum.
- e The remains of the ear cut off.
- f The styloid process.
- g The left cornu of the os hyoides, covered by the fibres of the hyo and thyro-pharyngeus.
- h The ligament of the maxillary joint.
- i The lateral ligament.
- k The ligamentum suspensorium of the stylo-glossus muscle.
- l The anterior,
- 2. The superior,
- 3. The inferior,
- 4. The posterior side of this ligament.
- l The ligamentum suspensorium of the os hyoides.
- m The masseter muscle.
- n n The internal pterygoid muscle.
- o The stylo-glossus muscle.
- p The stylo-hyoideus muscle.
- q The stylo-pharyngeus muscle, on which
- r A small nerve going to the pharynx, runs obliquely.
- s The musculus hyo-glossus, freed from the os hyoides.
- t t Each of the genio-glossi muscles.
- v The digastric muscle dissected.
- w The sterno-mastoideus muscle.
- x The lingual nerve.
- y The larynx, with some of the muscles which cover it turned back.

FIGURE III.

The Anterior Surface of the first and second Vertebrae, joined with the Occiput.

- a a A portion of the os occipitis.
- b b The transverse processes of the first vertebra.
- c c Those of the second.
- d The ligament which occupies the anterior opening between the occiput and first vertebra.
- e The capsular ligament of the right articulation of the occiput.

PART III.

- f The ligament of the left articulation cut off, that the articulation itself, and
- g The distance of the origin of the ligament, may be seen.
- h A slip adhering to the middle of this ligament.
- i The origin of the slip in the occiput.
- k Its termination in the tubercle of the first vertebra.
- l A slip uniting the first and second vertebra.
- m m The ligamentum proprium of the first vertebra.
- n n The ligament of the articulation of the first vertebra with the second.

FIGURE IV.

The Ligaments by which the Occiput is united with the Tooth-like process of the second Vertebra.

- a A portion of the occiput.
- b The second vertebra.
- c c The remains of the back-part which is cut off.
- d d Intervals occasioned by the removal of the first vertebra.
- e e The corona of the os occipitis.
- f The processus dentatus of the second vertebra.
- g The superior slip of the lateral ligaments, by which the occiput is connected with the tooth-like process.
- h The inferior slip.
- i The lateral ligamentous membrane.

FIGURE V.

The Ligaments which fix the Tooth-like process in its place.

N.B. The Crura of the Spinous Processes are cut off.

- a The anterior part of the occiput.
- b The second vertebra.
- c c The transverse processes of the first vertebra.
- d d The superior slips of the ligaments which unite the occiput with the tooth-like process.
- e The transverse ligament which fixes the tooth-like process.
- f Its inferior appendix.
- g Its superior appendix turned back.
- h The opening between the tooth-like process and occiput.
- i The articulations of the vertebrae, the small membranes being removed.

FIGURE VI.

The Figure and Origin of the Ligament which fixes the Tooth-like process, the process itself being removed.

- a a The superior glenoid sinus of the first vertebra, for its articulation with the occiput.
- b b The posterior ring cut off.
- c The transverse ligament.
- d d Its origins.
- e The superior appendix of the transverse ligament.
- f The inferior appendix.
- g Some small membranes in their way to the occiput.

D d

T H E

T H E

Sixty-fourth Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

THE whole *Carina* of the Spine of the Back, with the Ribs and Pelvis.

- | | |
|--|--|
| 1.—12. The bodies of the dorsal vertebræ. | g The musculus quadratus lumborum. |
| 13.—17. The bodies of the lumbar vertebræ. | h The right os ilium laid bare. |
| I.—XI. The ribs of each side cut off. | i The superior anterior triangular ligament of the pelvis. |
| a a The anterior common ligament of the bodies of the vertebræ, or anterior longitudinal fascia. | k The round anterior inferior ligament of the pelvis. |
| b b The place where it is as it were obliterated; but in this subject, it is very distinct. | l The longitudinal ligamentous filaments of the processus aliformis. |
| c The tendons of the muscles of the diaphragm. | m The symphysis of the ilium with the os sacrum. |
| d The remains of the musculus rectus colli. | n The intestinum rectum. |
| e e e The transverse processes of the lumbar vertebræ of the right side. | o The vesica urinaria. |
| f The psoas muscle of the left side. The right is removed. | p The ligament which forms a sort of sac between the sides of the bladder and intestinum rectum. |

THE

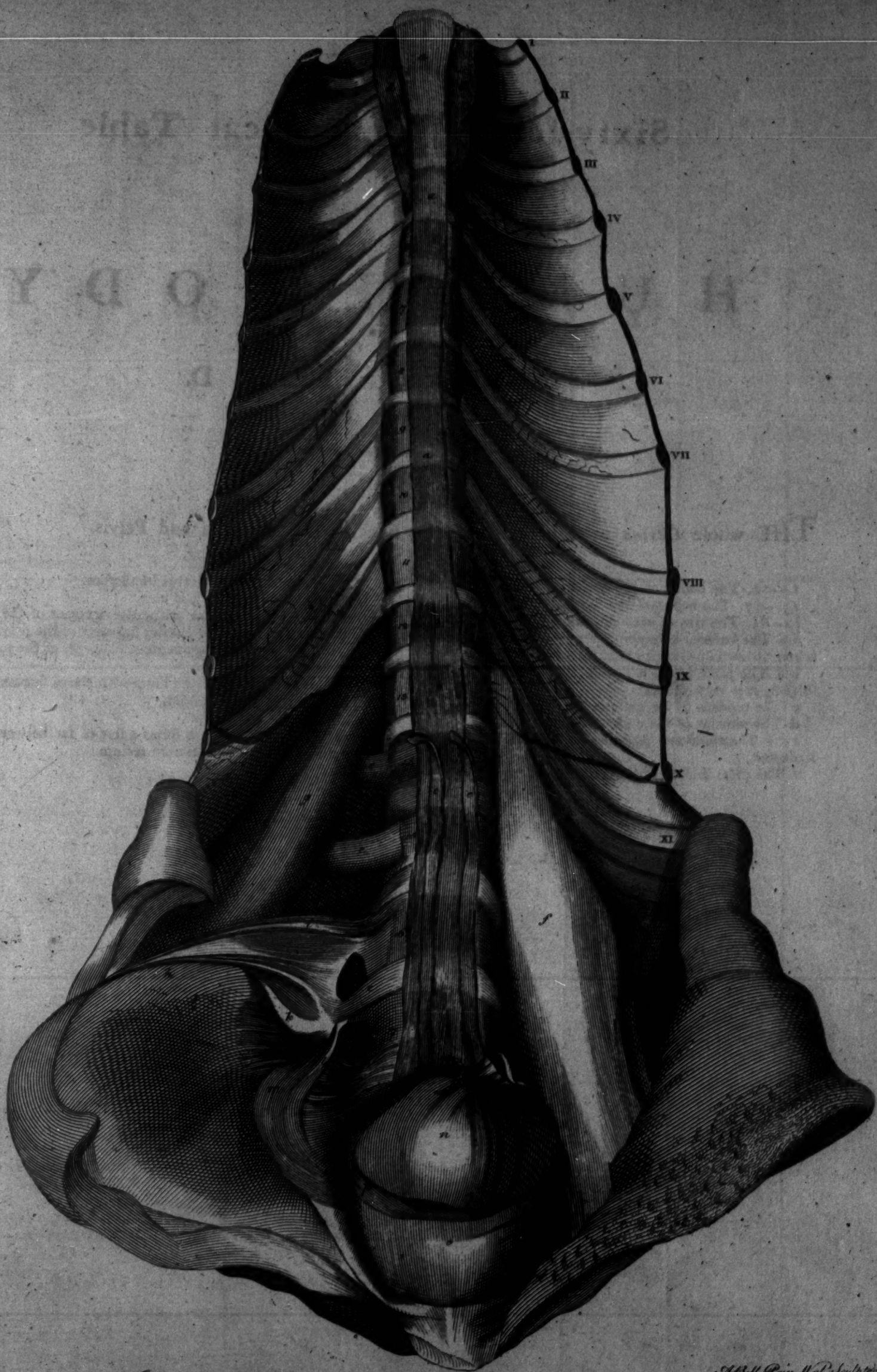


Fig. 1.



Fig. 2.



Fig. 3.

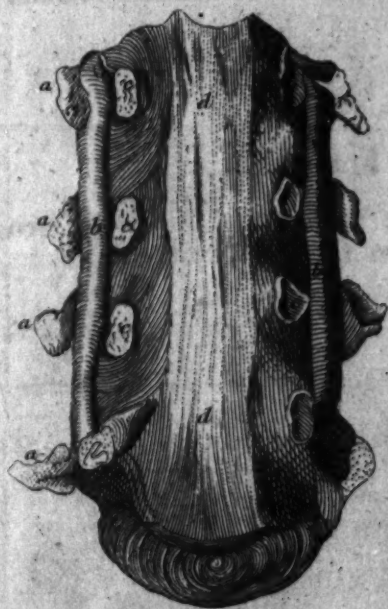


Fig. 4.



Fig. 5.



Fig. 6.

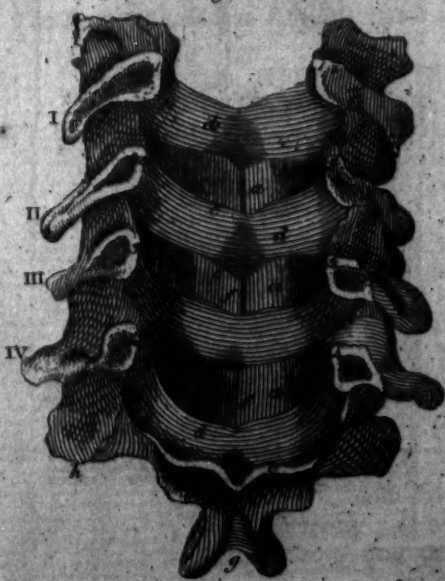


Fig. 8.

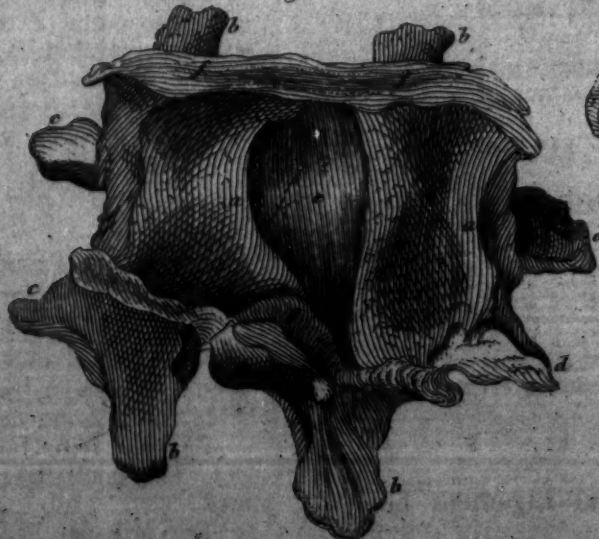
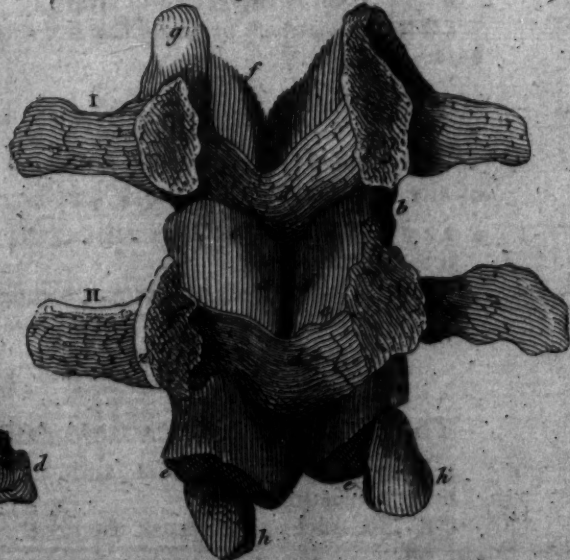


Fig. 7.



T H E

Sixty-fifth Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

FIGURE I.

THE Ligamentous Apparatus, by which the Occiput is connected with the Vertebrae of the Neck.

- a A portion of the occiput.
- b b b b The transverse processes of the 1st, 2d, 3d, and 4th vertebrae of the neck.
- c The ligamentous apparatus.
- d Its deeper lateral part.
- e e Its termination in the third and fourth vertebra.

FIGURE II.

The exit of the Dura Mater from the Cranium, together with a portion of its Anterior Sheath, or the Longitudinal Posterior Fascia of the Vertebrae.

- N. B. The Crura of the Processes are cut off.
- a A portion of the occiput.
- b b b b The transverse processes of the 1st, 2d, 3d, and 4th vertebrae of the neck.
- c The exit of the dura mater from the cranium.
- d The place where the transverse ligament of the tooth-like process swells out.
- e Its process in the dorsal canal.
- f The posterior longitudinal fascia of the vertebrae freed from the dura mater.
- g Part of the dura mater turned back.
- h A portion of the vertebral artery.
- i The articulation between the first and second vertebra laid bare.

FIGURE III.

The Continuation of the Posterior Longitudinal Fascia of the Vertebrae in the Neck and beginning of the Back.

- a a a a The transverse processes of the vertebrae.
- b b The vertebral arteries.
- c c The remains of the spinous processes which are cut off.
- d d The whole breadth of the posterior longitudinal fascia.

FIGURE IV.

The Continuation of the same Fascia in the Loins.

- a The first lumbar vertebra, and
- b The second.
- c c The traces which mark the crura of the spinous processes cut off.
- d The posterior longitudinal fascia of the vertebrae.
- e e Its expansion over the cartilaginous intervals.

FIGURE V.

The Cartilaginous Intervertebral Ligament between the Lumbar Vertebrae.

- 1. The first lumbar vertebra.
- 2. The second.
- a The highest elevation of the vertebrae, over the bodies of which blood-vessels are distributed.
- b b The lamina of the exterior stratum of the intervertebral ligament.
- c The second stratum.
- d The third.
- e The fourth.

FIGURE VI.

The Posterior Part of the Vertebrae of the Neck, seen on its Anterior Surface, with the Yellowish Ligaments of the Crura.

- I. II. III. IV. The transverse processes of the 3d, 4th, 5th, and 6th vertebrae of the neck.
- a a a The yellowish ligaments of the crura of the spinous processes.
- b Their terminations at the lateral articulations.
- c c c Their terminations at the margins of the crura.
- d d d The crura of the spinous processes.
- e The natural thickness of the ligaments.
- f The intermediate rima.
- g The spinous process of the sixth vertebra.
- h The descending process.

FIGURE VII.

The Yellowish Ligaments in the Lumbar Vertebrae.

- I. II. The transverse processes of the first and second lumbar vertebrae.
- a a The yellowish ligaments of the crura.
- b b Their terminations at the lateral articulations.
- c c Their terminations at the margins of the crura.
- d d The crura of the spinous processes.
- e The natural thickness of the ligaments.
- f The intermediate rima.
- g The ascending posterior processes.
- h The descending anterior processes.

FIGURE VIII.

The Spinous Processes of two Lumbar Vertebrae, with the interposed Membrane.

- a a The spinous processes of the lumbar vertebrae.
- b b b b The transverse processes.
- c c The superior, or ascending processes.
- d d The inferior, or descending processes.
- e The interspinous membrane.
- f f The small ligamentous cords, to which the apices are joined.
- g The articular ligament.

T H E

T H E

Sixty-sixth Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

FIGURE I.

THE Left Side of the Back, with the Spine, Ribs, and Ligaments belonging thereto.

- I. II. III. &c. The twelve ribs.
 1. 2. 3. &c. The apices of the twelve transverse processes of the vertebræ of the back.
 12.—14. The transverse processes of the lumbar vertebræ.
 a a The external transverse ligaments of the ribs.
 b b The remains of the ligaments of the cervix of the ribs.
 c c The straight, longitudinal, small ligaments of the transverse processes, with the accessory fasciculi, to the VI. VII. VIII. IX. ribs.
 d Small ligamentous cords between the apices of the spinous processes.
 e Ligamentous expansions extending to the last rib.

FIGURE II.

Three Vertebræ of the Back, with Portions of the three attached Ribs, and their Ligaments seen within the Thorax.

I. II. III. The bodies of the three vertebræ.

1. 2. 3. Portions of the three ribs.

a a a The ligaments of the small head of the ribs, by which they are fixed to the bodies of the vertebræ.

b b b The internal ligaments of the cervix of the ribs, by which they are fixed to the tuberosities of the next superior transverse processes.

c The remains of the membrane of the intercostal muscles.

d The spinous process.

FIGURE III.

The same three Vertebræ of the Back, with the same portions of Ribs and their Ligaments, viewed posteriorly.

I. II. III. The crura of the three spinous processes.

1. 2. 3. The three portions of ribs.

a a a The external transverse ligaments.

b b The internal ligaments of the cervix of the ribs.

c c The external ligaments of the cervix of the ribs.

Fig. 1.

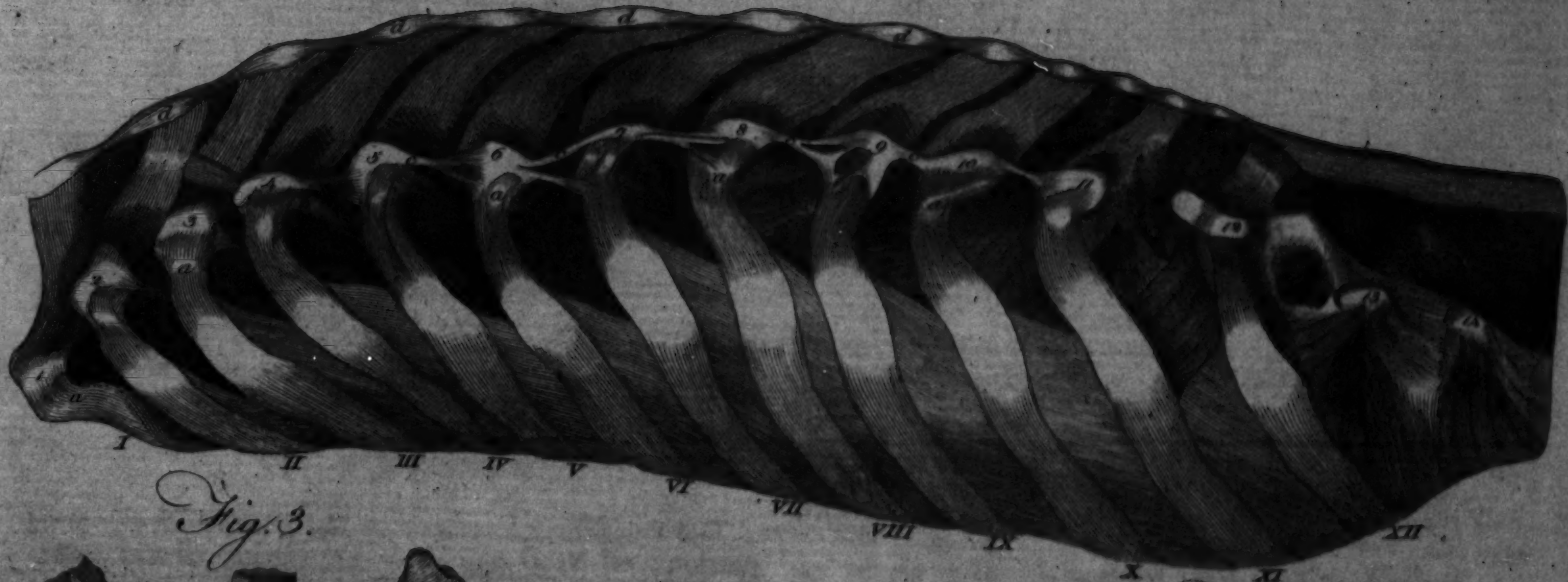


Fig. 3.

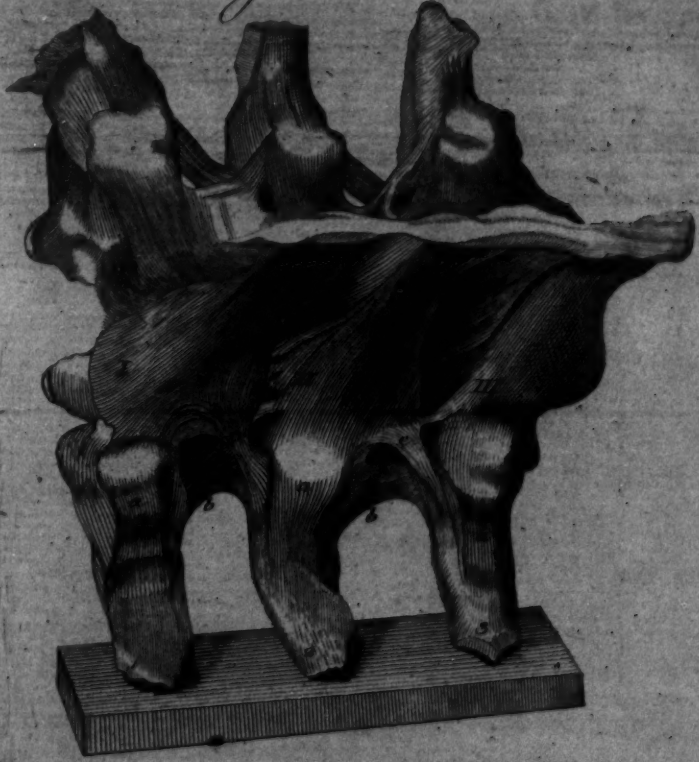


Fig. 2.



A. Bell Pin. M. d. Sculptor fecit.

Fig. 1.

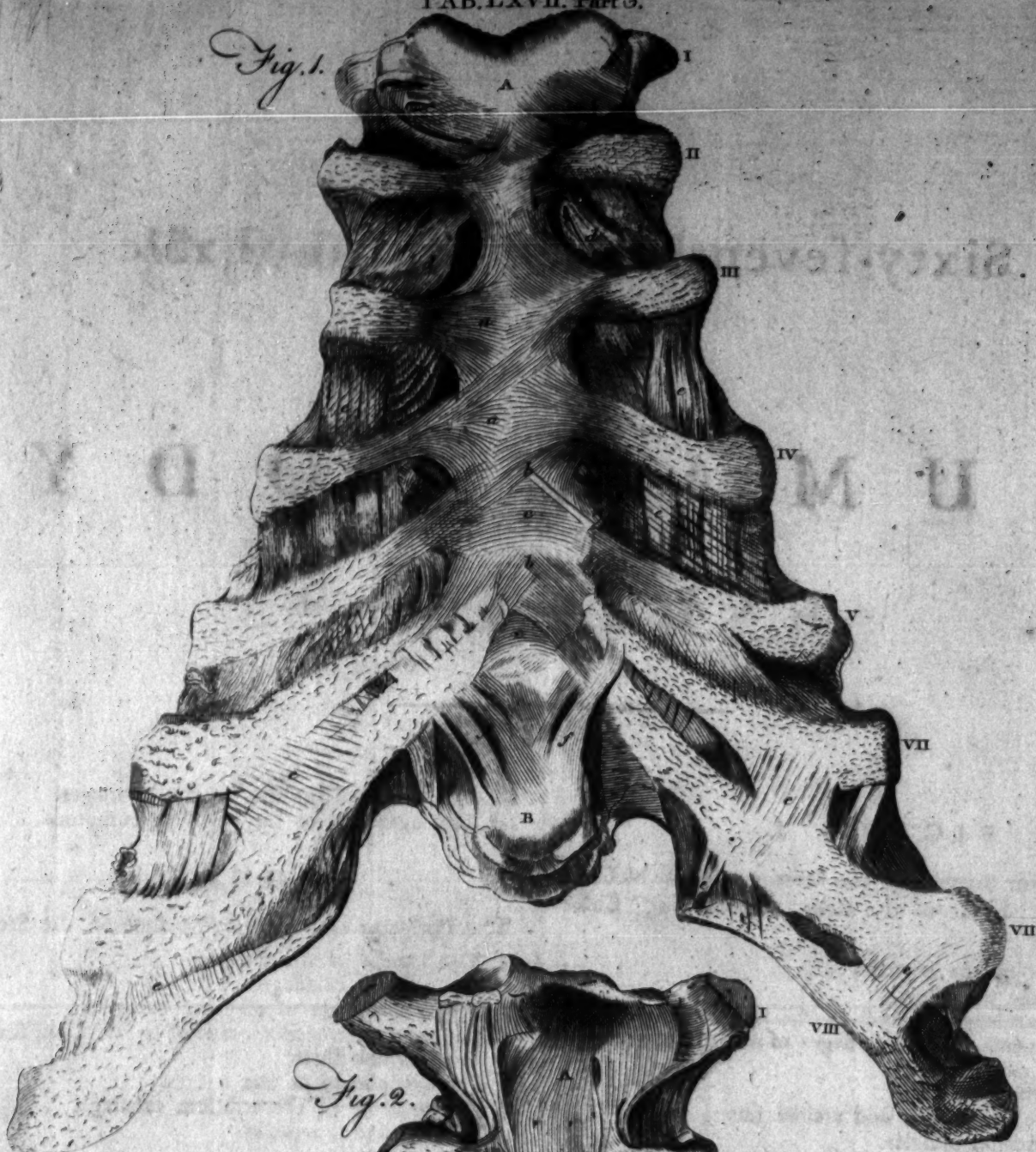
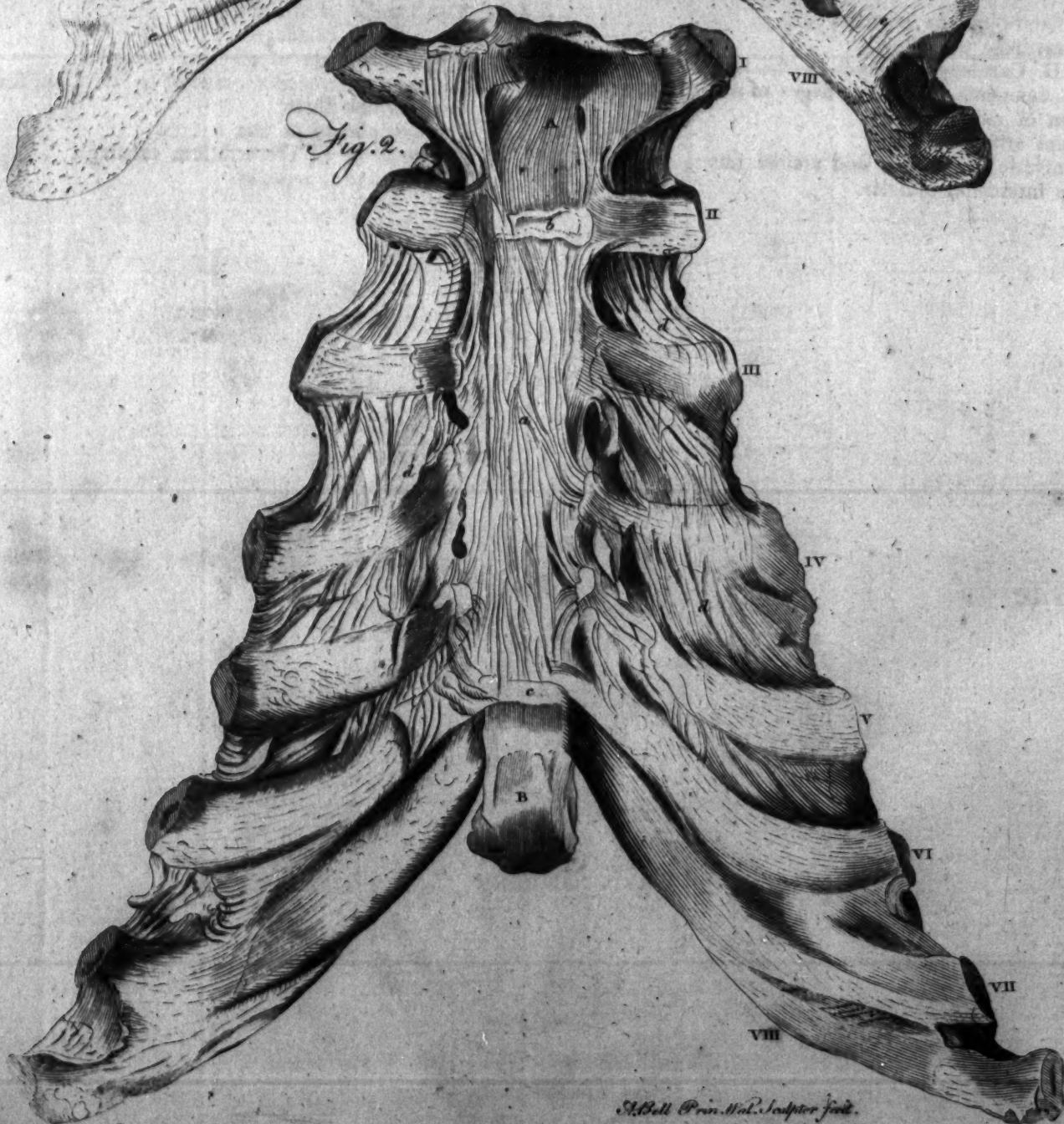


Fig. 2.



T H E

Sixty-seventh Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

FIGURE I.

THE Anterior Surface of the Sternum, with the Cartilages of Eight of the Ribs, and Cartilago Eniformis.

- A The handle of the sternum.
- B The cartilago eniformis.
- I. II. VIII. Cartilages of eight of the ribs.
- a a The ligaments of the cartilages of the ribs distributed in the form of radii.
- b b Fibres arising obliquely.
- c c Transverse, horizontal, and arched fibres.
- d d The intercostal muscles.

- ee The waving ligaments of the cartilages.
- ff The ligaments of the cartilago eniformis.

FIGURE II.

The Posterior and Interior Surface of the Sternum.

- A The handle of the sternum.
- B The xiphoid cartilage.
- I. II. III. Cartilages of eight of the ribs.
- a The plain interior membrane of the sternum, strengthened with longitudinal fibres.
- b The articulation of the handle.
- c The juncture of the eniform cartilage.
- d The intercostal muscles.

T H E

Sixty-eighth Anatomical Table

O F T H E

H U M A N B O D Y

E X P L A I N E D.

FIGURE I.

THE Posterior Surface of the Os Sacrum, and Os Ilium of the Left Side.

- a The os sacrum.
- b The os coccygis.
- c The os ilium.
- d The tuber of the os ischium.
- e The sinus between the inferior posterior spine of the ilium, and spine of the ischium.
- f The posterior long ligament of the os ilium.
- g Its posterior short ligament.
- h Its posterior lateral ligament.
- i The ligamenta accessoria vaga, on the back of the os sacrum.
- k The large sacro-ischiatic ligament.
- l Its appendix, or superior membranous production.
- m The small sacro-ischiatic ligament.
- n The flesh of the levator coccygis muscle.
- o Various irregular ligamentous expansions about the margins of the foramina in the os sacrum.
- p The longitudinal ligaments of the os coccygis.
- q The origin of the musculus quadratus of the thigh.
- r The origin of the musculus seminervofus.

FIGURE II.

The Right Cavity of the Pelvis, the Os Ilium of the Left Side being removed.

- a The os sacrum.
- b The right os ilium.
- c The os ischium.
- d The os pubis.
- e The beak-like cartilaginous lateral surface of the os sacrum, for the articulation of the os ilium.
- f A protuberance covered with ligamentous villi, for the same articulation.
- g The right wing-like process of the os sacrum.
- h The linea alba, which marks the articulation of the os ilium and sacrum.
- i The spinous process of the os ischium.
- k The cervix of this bone.
- l The small internal sacro-ischiatic ligament.
- m The remains of the adjacent levator coccygis muscle.
- n A portion of the large external sacro-ischiatic ligament.
- o Its inferior falciform production of Winslow.
- p The foramen majus, for the transmission of the musculus pyriformis.
- q The foramen minus for the transmission of the obturator internus.
- r The superior oblique sinus of the foramen thyroideum.
- s The membrana obturans.
- t The transverse ligament.
- u A portion of the tendon of the psoas minor muscle.
- xx The ligamentous ring of the os pubis, with the interposed cartilage.
- y Its protuberance.

END OF PART THIRD.

Fig. 1.

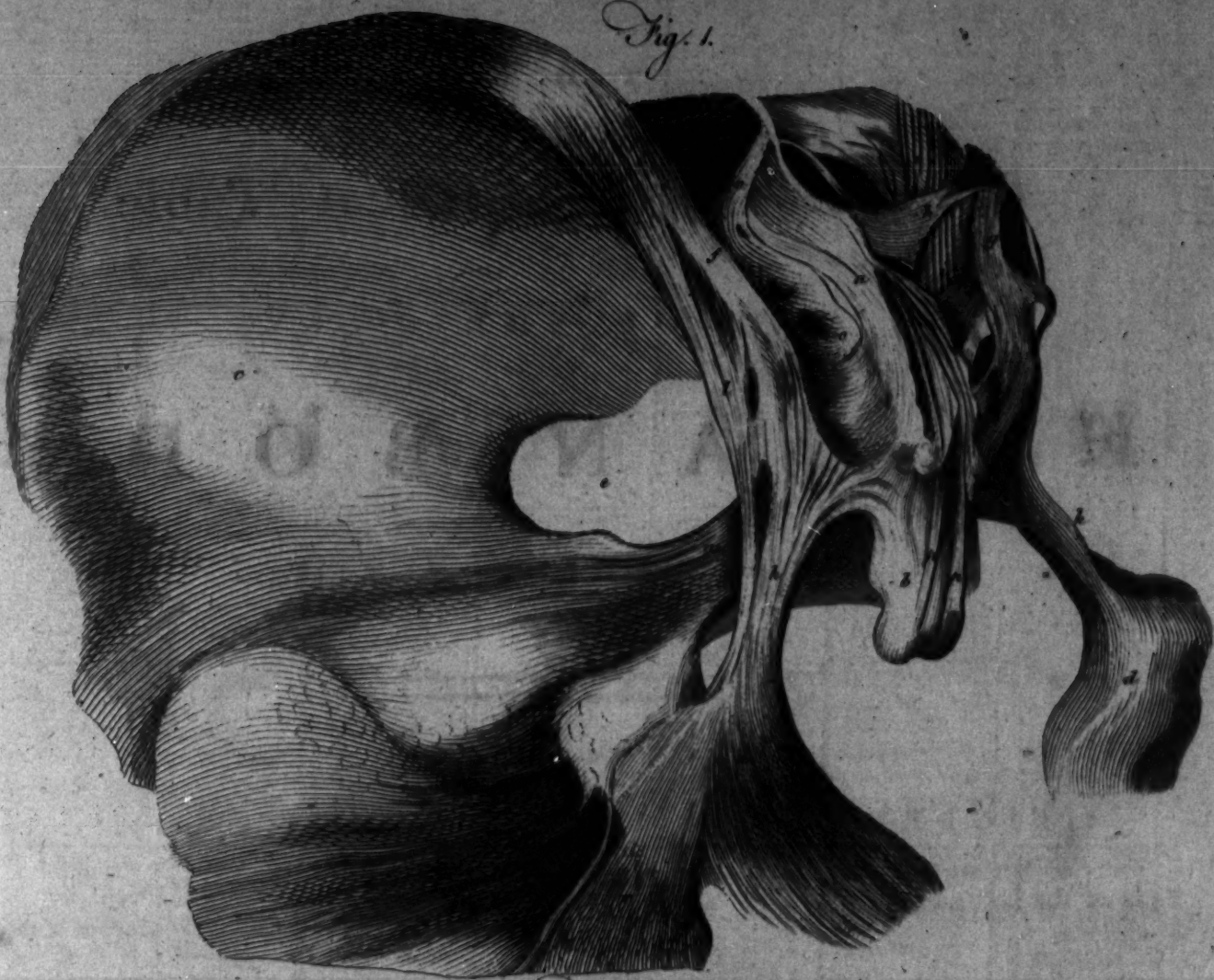


Fig. 2.

